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Understanding the contexts in which children develop, including distal ecological factors, proximal family influences, and various cultural factors is essential for promoting positive outcomes for young children with disabilities or developmental delays. However, little is known about the everyday experiences and engagement patterns of families from rural communities who have infants and toddlers with disabilities or developmental delays. This study was used to investigate the perspectives of 17 parents across four rural counties in North Carolina was investigated concerning ecocultural factors that enhanced or prevented sustained engagement with their infants and toddlers with disabilities. A concurrent transformative mixed methods design guided data collection and analysis. Data were collected by means of focus groups, surveys, field notes, and demographic forms. Constant comparison analysis was used to analyze qualitative data. Descriptive statistics were obtained from surveys and demographic forms. Results indicate that parents primarily perceive ecocultural features as having either a positive influence or no influence on their engagement with their children. Results also indicate that parents actively make accommodations to interrupt potential barriers to engagement and also use positive aspects within their communities to facilitate engagement. These findings contribute to research and practice in the field of early intervention by drawing attention to the adaptive capacities of families in rural

communities who have children with disabilities and delineating community resources that could inform the types of interventions that these families are likely to sustain.

AN INVESTIGATION OF ECOCULTURAL INFLUENCES ON SUSTAINED
ENGAGEMENT: INSIGHTS FROM PARENTS IN RURAL NORTH
CAROLINA WHO HAVE INFANTS AND TODDLERS
WITH DISABILITIES

by

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APPROVAL PAGE

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CHAPTER I

INTRODUCTION

The intent of this study is to identify the ecocultural (ecological-cultural) factors that affect parents' sustained engagement in activities that support their children's learning. The target population for this study is families from rural communities who have infants or toddlers enrolled in the North Carolina Infant-Toddler Program (also called Part C or early intervention). The North Carolina Infant Toddler Program operates under regulations of the Individuals with Disabilities Education Improvement Act of 2004 (IDEA 2004), Part C, which is the major law in the United States that ensures that children ages birth to three years old with disabilities and developmental delays receive special education services (IDEA, 2004).

Little is known about the everyday experiences that affect the sustainability of learning opportunities of families from rural communities who have infants and toddlers with disabilities or developmental delays. For the purposes of this study, rural counties are defined as those with a population density of no more than 250 people per square mile as of the 2010 United States Census (North Carolina Rural Economic Development Center, Inc., n.d.). Seventeen parents from families across four rural counties were recruited for this study to better understand associations between various features in rural counties and parents' engagement with their children. Each parent completed a detailed

demographics form and survey. A subset of parents from each county ($n=14$) participated in a focus group.

The ecocultural influences that are examined in this study were drawn from the ecocultural domain framework (Gallimore, Weisner, Kaufman, & Bernheimer, 1989), which depicts 12 ecocultural factors ordered hierarchically by relative influence (see Appendix A). Ecocultural theory is the overarching theoretical lens used to shape this study (Weisner, 1984). Ecocultural theory highlights parents' natural propensity to establish and sustain routines despite the existence of ecological features, which often pose a challenge (Gallimore et al., 1989). Therefore, approaching this study through an ecocultural lens gives the study a strengths-based focus.

In addition to ecocultural factors, this study explores parents' engagement patterns. According to White, Taylor, and Moss (1992), parent involvement should be defined with consideration to the types of activities in which parents engage. Accordingly, this study examines family involvement in terms of parents' engagement in sets of routines and activities, which are referred to interchangeably with the term early learning opportunities (Dunst, Hamby, Trivette, Raab, & Bruder, 2000). The term early learning opportunities was used by Dunst et al. (2000) to depict a broad range of activities and routines associated with young children's learning and development. An example of an early learning opportunity would be "child routines," and an associated activity would be "brushing teeth." Refer to Appendix B for a full list of early learning opportunities and related activities. In addition to types of engagement, this study explores parents' ability to sustain engagement based on the frequency in which they

engage in early learning opportunities in their homes. Sustained engagement is broadly explored along the following dimensions: (a) social-ecological fit between family ecology and available resources, (b) congruence and balance among family members' interests and concerns, (c) meaning to the family, and (d) stability/predictability as a result of dimensions 1-3 (social-ecological fit..., congruence..., and meaning...) (Weisner, Matheson, Coots, & Bernheimer, 2005).

In order to investigate these variables, I use a mixed methods design, including focus group interviews and surveys. I analyze focus group data by means of constant comparison analysis (Creswell, 2013). I use descriptive analysis to analyze survey data. Additionally, I collected field notes and demographic data. In combination, the focus group interviews, surveys, demographic data, and field notes provided the rich, descriptive data best suited to answer the following question: What ecocultural factors of families from rural communities impact parents' sustained engagement in early learning opportunities? Findings from this study are expected to narrow the research to practice gap in early intervention by providing the field with insights on the sustainable early learning opportunities parents provide for their children in relation to the factors found in rural settings.

The remainder of this chapter will be used to describe: (a) the research problem, (b) the purpose of this study, (c) the theoretical framework, (d) the significance of this study, and (e) an overview of following chapters, including the search criteria for the literature review.

Statement of the Research Problem

Little is known about how various factors within the rural context interface with families' resources, priorities, and concerns related to engagement patterns with children who have disabilities or developmental delays (Ridgley & Hallam, 2006). Families who have children with disabilities often experience unique circumstances (Seltzer, Greenberg, Floyd, Pettee, & Hong, 2001). Indeed, Seltzer et al. (2001) compared parents who have children with developmental disabilities to parents who have children without disabilities. They found that parents in the former group had lower rates of employment, larger families, and lower rates of social participation. When these families live in rural communities, they face additional challenges, such as limited access to services (Butera & Maughan, 2001) and less social connectedness (Darling & Gallagher, 2004). Researchers have focused narrowly on risk and protective factors (e.g., neighborhood and childcare quality) in rural communities (De Marco & Vernon-Feagans, 2013). Studies that attempt to examine children within broader contexts often limit their scope to demographics such as race or socioeconomic status (Brooks-Gunn & Markham, 2005; Chazan-Cohen et al., 2009; Schlee, Mullis, & Shriner, 2009; Wanless, McClelland, Tominey, & Acock, 2011) and proximal influences within the home such as maternal depression, parent stress, or parent sensitivity/responsiveness (Anthony et al., 2005; Barnett, Shanahan, Deng, Haskett, & Cox, 2010; Duppong-Hurley, Epstein, Nelson, Stage, & Synhorst, 2007). However, few studies have shed light on the distal factors that affect parents' roles in their children's developmental outcomes (Ridgley & Hallam,

2006). Therefore, it is plausible that the needs of children from rural communities often go unmet.

Ridgley and Hallam (2006) conducted a study to determine how well Individualized Family Services Plans (IFSPs) reflected the needs of parents who live in rural communities. They interviewed parents of children enrolled in early intervention (EI) programs and collected artifacts, including IFSPs. Their findings highlight a potential disconnect between the identified concerns of families from rural communities and goals listed in their IFSPs. Specifically, parent interviews indicated that they had concerns about parenting a child with a disability, the health of their children, and family issues. However, though their IFSPs addressed parenting a child with a disability, they did not include family outcomes or parent-identified support needs. To understand the development of children with disabilities and their families, consideration must be given to the physical and social contexts in which they live (Bernheimer & Weisner, 2007). Moreover, to intervene, consideration must be given to the values and to the daily, lived experiences of families who reside in these contexts.

IDEA 2004 mandates that children enrolled in early intervention services receive services that target child and family outcomes (IDEA, 2004). Furthermore, it stipulates that these outcomes should be reflected in the IFSP, which guides service delivery, based on the unique needs of the child and family. Despite IDEA 2004 regulations and consensus within the field of early intervention that the needs of children with disabilities should be addressed within consideration of the family context (Campbell & Sawyer, 2007; Dempsey & Keen, 2008; IDEA, 2004; Salisbury, Woods, & Copeland, 2010),

literature shows that early intervention services continue to focus on the child, rather than the child within his or her family context (Moes & Frea, 2002; Turnbull et al., 2007).

Mahoney, Boyce, Fewell, Spiker, and Wheeden (1998) concluded that professionals shy away from a focus on parent-child interactions and focus narrowly on the child because of a fear that a broader focus might interfere with the family's cultural beliefs. However, it is essential to understand the context in which children receive early intervention services broadly (Bailey, Raspa, & Fox, 2012). The examination of systems that interact with children provides insight into the cultural values of families (Super & Harkness, 1986) and has the potential to foster positive developmental outcomes in young children in the future (Spagnola & Fiese, 2007).

In addition to understanding the ecocultural factors with which families who live in rural communities interact, it is important to grasp the extent to which these factors influence parents' ability to sustain engagement with their children who have disabilities. This knowledge is at the foundation of understanding how families' daily routines are impacted and, thus, gives professionals insight into learning opportunities that exist (Bernheimer & Weisner, 2007). Family routines have gained attention during recent years for their inherent sustainability attributes (Dada, Granlund, & Alant, 2007; Dunst et al., 2000; Horn, Lieber, Li, Sandall, & Schwartz, 2000; McWilliam, 2012). Research in the field of early childhood special education depicts a positive relationship between sustainable routines and child outcomes (Llewellyn et al., 2010; Moes & Frea, 2002). In fact, sustainable routines are believed to mediate the negative influence of various ecological factors on child outcomes (Weisner, Matheson, Coots, & Bernheimer, 2005).

Several researchers propose sustainability as a construct for measuring family functioning and adaptation in relation to various ecological factors (Llewellyn et al., 2010; Weisner et al., 2005). Historically, a family's influence on children's developmental trajectories has been examined through a narrow lens, which has exploited decontextualized influences and children's deficits (Weisner et al., 2005). However, sustainability embraces the complexity of parenting a child with a disability within the confines of diverse contexts, such as rural communities, and promotes families as active participants. Specifically, "sustainability ... puts developmental research and the study of learning squarely in the context of children and families engaged in activities within a cultural community" (Weisner et al., 2005, p. 4).

Each family who has a child with a disability and lives in a rural community interacts with ecocultural factors differently and, thus, has different engagement patterns. Unfortunately, the limited understanding of the influence of ecocultural factors on families from rural communities who have children with disabilities precludes further assumptions. Thus, various questions remain. What routines are families sustaining? What are the ecocultural barriers and facilitators to parents' sustainability efforts? Is sustainability realistic for families in rural communities? These questions are essential to broadening the scope of knowledge about families of children with disabilities who live in rural communities.

Purpose of the Study

The purpose of this study is to provide insights about ecocultural influences in rural counties and their impact on engagement for families of infants and toddlers with

disabilities and/or developmental delays. According to the definition of rural provided in the opening introduction, which has been adopted by North Carolina General Assembly and the US Census, there are 80 rural counties in North Carolina. An additional five counties are considered transitional rural due to various rural characteristics. Figure 1.1 depicts the 85 counties that have been designated rural and 15 that have been designated urban with blue and white backgrounds, respectively.

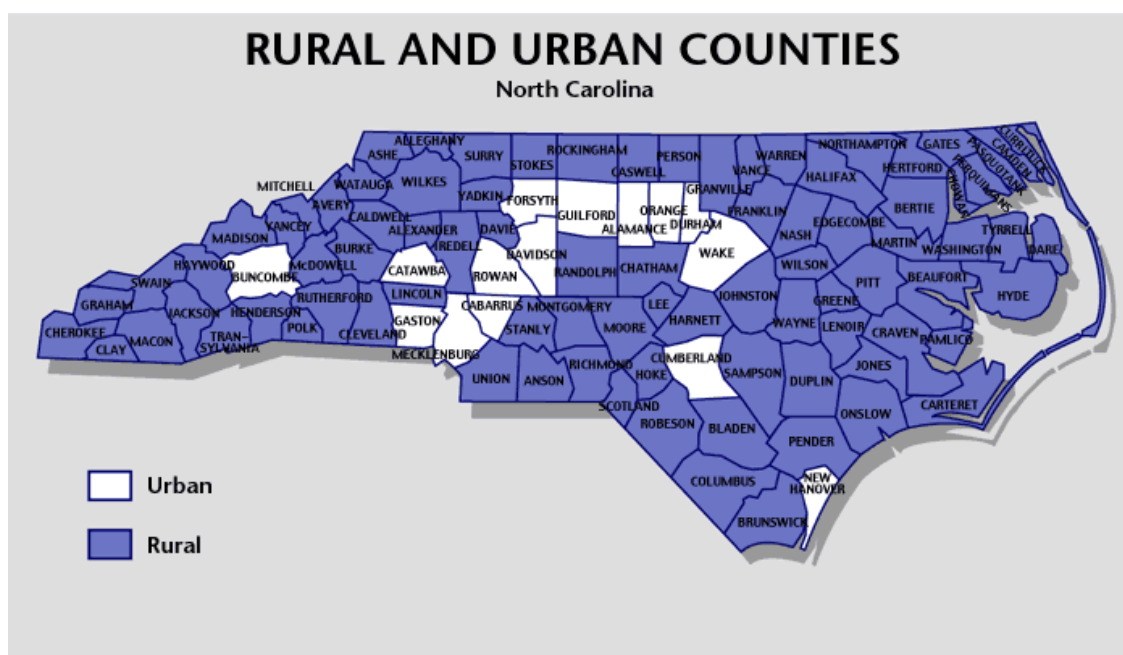


Figure 1.1. North Carolina Urban-Rural Map.

The most current Annual Performance Report for the Infant-Toddler program provided by the North Carolina Department of Health and Human Services (2011) indicated that 10,206 children were enrolled in early intervention (2.79% of the North Carolina's total population). Of those enrolled, 4,993 lived in rural counties (48.92%). Knowledge gained from this study is expected to inform practices designed to meet the

diverse needs of children and families living in the rural counties as well as families from counties with similar characteristics. This expectation is aligned with IDEA's 2004 mandate that states make concerted efforts to identify, evaluate, and meet the needs of children who live in rural communities (IDEA, 2004).

This study aims to examine the ecocultural resources and constraints that exist for families in rural communities through the ecocultural domain framework (Gallimore et al., 1989). Through a deductive process, this study: (a) examines the influence of ecocultural factors in rural communities on families who have young children with disabilities, and (b) explores engagement patterns of these families. This study also explores ways in which proximal cultural influences mediate against the influence of broader ecological influences. Consequently, the results contribute insights about supporting positive child and family outcomes.

Theoretical Framework

This study adopts ecocultural theory (Weisner, 1984) as a guiding framework to explore parents' sustained engagement in early learning opportunities in alongside broader ecocultural factors. Ecocultural theory complements this study well because it encompasses the key constructs that are examined. Additionally, ecocultural theory is informed by family ecology and cross-cultural research as well as an analysis of case files involving children with developmental delays (Gallimore et al., 1989). Ecocultural theory draws from ecological and cultural approaches to understand structural and cultural dynamics, respectively, that affect families and the developing children therein (Bernheimer, Gallimore, & Weisner, 1990). This theory posits that families seek to

maintain meaningful early learning opportunities (i.e., daily routines or activity settings). When ecological or cultural dynamics interrupt early learning opportunities, families make *accommodations* in one of 12 domains: (a) family subsistence and financial base, (b) accessibility of health and educational services, (c) home and neighborhood safety and convenience, (d) domestic task and chore workload (excluding childcare) and family division of labor, (e) childcare tasks, (f) children's play groups, (g) marital role relationships, (h) networks and organizational involvement, (i) role of father and mother in childcare, (j) sources of child cultural influence, (k) sources of parental information and goals, and (l) community heterogeneity (Gallimore, Weisner, Kaufman, & Bernheimer, 1989).

Ecocultural theory encompasses a strengths-based approach in which families proactively make accommodations in their ecocultural niche, a unique, socially constructed place that includes ecological and cultural features, which functions to sustain routines that are meaningful for a family, to counter disruptive ecological influences (Bernheimer et al., 1990). For example, a family who has a child with physical limitations might buy a new vehicle that is wheelchair accessible.

Accommodation, as it is referred to here, as well as the daily use of the term, implies that strengths and needs exist. Oxford Dictionaries (2013) notes that accommodation comes from the Latin word *acomodare*, which means to “fit one thing to another.”

Accommodation is defined as: “a convenient arrangement; a settlement or compromise” or “the process of adapting or adjusting to someone or something” (Accommodation, n.d.). Ecocultural theory indicates that ecological and cultural factors within a family’s

niche will determine the accommodations a family makes. Drawing on the previous example, a family that receives health services in the home or that values participation within a defined space might be less apt to make an accommodation (i.e., purchase a wheelchair accessible vehicle) than a family that has to transport a child with a disability to service providers or that often engages in family outings. This study draws from ecocultural theory to better understand ecological and cultural factors within the niches of families from rural communities and how they relate to parents' propensities to sustain engagement in early learning opportunities.

Figure 1.2, the theoretical framework of the ecocultural niche of families and its inputs and outputs, depicts the ecocultural niche of families in the center triangle. The niche is depicted in a triangle because ecocultural theory posits that the 12 domains it encompasses have hierarchical influences (Bernheimer et al., 1990). Above the niche are ecological and cultural inputs, which influence each other and flow into the niche. Ecological characteristics are defined as “aspects...which directly affect subsistence quest and protection from threats to physical survival” (Ogbu, 1981, p. 422). By contrast, culture is defined as a “complex system of common symbolic action patterns (or scripts) built up through everyday human social interaction by means of which individuals create common meanings and in terms of which they organize experience” (Edwards, Knoche, Aukrust, Kumru, & Kim, 2006, p. 141). The ecological and cultural inputs examined in this study are ecocultural features within the 12 aforementioned domains. The square surrounding ecology represents the somewhat stagnant nature of ecological systems. The circle surrounding culture represents an evolving nature, which implicitly reflects

families' ability to adapt. Below the niche are outputs. In this study, the output is parents' sustained engagement in early learning opportunities.

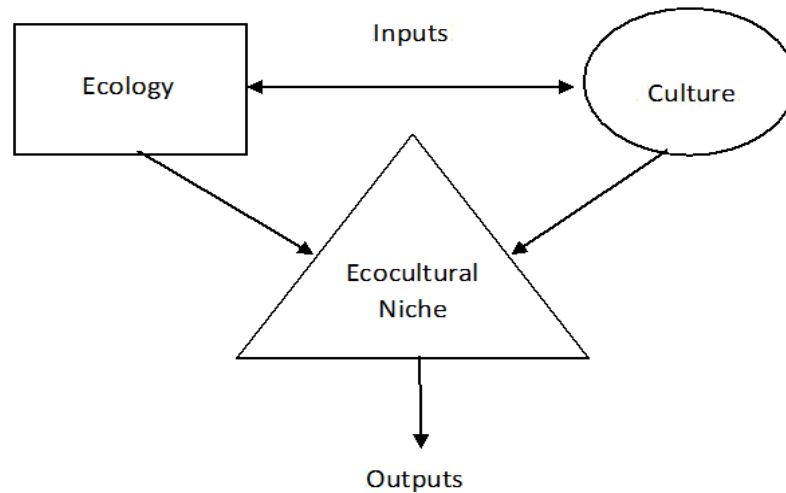


Figure 1.2. Theoretical Framework of the Ecocultural Niche of Families.

Significance of the Study

Researchers in the field of early childhood special education have demonstrated a move toward exploring the family context; however, they have not embraced the full scope of family life (Weisner et al., 2005). Currently, no known studies holistically examine the engagement practices of families from rural communities and how these practices are shaped by broader ecocultural influences. Therefore, this research examines whole family characteristics (i.e., family routines, sustainability) rather than individual family member characteristics (Fiese, Rhodes, & Beardslee, 2013). Having a better understanding of the whole family, including the context in which the family lives, better prepares professionals to support families in their role as partners in parent-professional

relationships (Summers, 2008) and supports the shift toward measurable family outcomes (Bernheimer & Weisner, 2007).

Conclusion

Thus far in this chapter, the following have been presented: (1) an introduction, (2) the research problem, (3) the purpose of this study, (4) the theoretical framework and (5) the significance of this study. Chapter II presents an introduction to the literature review and a review of literature that is relevant to the research question for this study. Chapter III details the methodology that is used to guide this inquiry and specific proposed methods.

CHAPTER II

REVIEW OF THE LITERATURE

This literature review presents current literature related to the variables that are examined in this study. Because a scarce amount of literature exists about the connections between variables in the field of early intervention, literature from other fields (e.g., Part B special education services, human development, early childhood education, consumer sciences, and law) was used to develop a collective understanding of the problem. When possible, I present findings from empirical studies that examine the target population for this study.

The literature discussed in this chapter was obtained by means of an electronic-based literature search using Academic Search Complete, ERIC, PsycINFO, and SociIndex. The following terms or sets of related terms were used to conduct the search: (a) natural setting or natural environment or routines-based or daily activities, (b) early intervention or family-centered, (c) sustain*, (d) rural, (e) cultural, and (f) ecological or systems. Initial search results were narrowed to include empirical studies and book chapters published after 1988 and available in English. The year 1988 was selected as a cutoff date because it marks the publication of the seminal book that outlined the strengths-based principles that have since guided the work of professionals who work with families enrolled in early intervention services (Dunst, Trivette, & Deal, 1988). Articles that identified packaged intervention or parent training as the independent

variable were also excluded, because this study is concerned with examining existing capacities within families. The reference lists of the resulting articles yielded additional publications that met the established criteria. Additional publications meeting the criteria outlined above were identified. Finally, theoretical publications from the early 1980s were added to assist with conceptualizing constructs discussed. The resulting articles inform the following literature review, which is organized into three topics: (a) rural community characteristics, (b) early intervention service delivery, and (c) parent involvement. Note that the term parent involvement instead of parent engagement is used, because literature included in this review predominantly used this term. The literature review begins with a comprehensive discussion of rural community characteristics. This section is subdivided by the ecocultural domains outlined in Chapter I. Next, I discuss literature on early intervention service delivery. Finally, I present literature on parent involvement.

Rural Community Characteristics

There is a broad base of literature that seeks to exact a strengths-based approach (e.g., capacity-building, accommodation) to working with families (Dunst & Trivette, 2009; Maul & Singer, 2009; Skinner & Weisner, 2007; Swanson, Raab, & Dunst, 2011), particularly low-income families (Sheely-Moore & Ceballos, 2011). In order to meet the needs of families, it is important to reconcile families' strengths with their everyday experiences by examining distal influences within the greater ecological and cultural contexts with which they interact (Bernheimer & Weisner, 2007). Therefore, this section highlights ecocultural characteristics of rural communities that contribute to the

formation of a family's ecocultural niche (Gallimore et al., 1989; Weisner, 1984), with an emphasis on rural communities.

Studying proximal and distal influences across various social, cultural, and ecological systems, which have been mentioned earlier, is one way to understand the context in which children develop (Bronfenbrenner, 1986; Bronfenbrenner, 2005). Proximal influences include child characteristics, family characteristics, and school, whereas distal influences include political and community systems (Bronfenbrenner, 2005). In the fields of anthropology and developmental psychology (fields influencing the development of ecocultural theory), the examination of these influences on children's development has been explained through a niche framework. Super and Harkness (1986) provide one example of a niche. The niche they describe includes: (a) physical and social settings, (b) culturally-regulated norms of child rearing, and (c) parent psychology. These three systems work together to mediate children's development within societal culture at large. Weisner (1984) defines a niche that is comprised of the hierarchical ecocultural domains that form the foundation for this study. Families proactively make accommodations in their ecocultural niche in order to counter ecological influences that are disruptive to family routines.

IDEA 2004 requires states to ensure access to special education services across geographic locations (IDEA, 2004). More specifically, it requires states to develop policies and procedures "to enhance the capacity of State and local agencies and service providers to identify, evaluate, and meet the needs of all children, particularly minority, low-income, inner city, and rural children, and infants and toddlers in foster care" (IDEA,

2004, p. 113). Given the marginalization of many children from rural communities due to poverty manifestations (De Marco & Vernon-Feagans, 2013; Dolan, Bauer, & Braun, 2011; Lichter & Johnson, 2007; Smith & Tickamyer, 2011), the ecological and cultural factors that affect parents living in rural areas are of concern.

The relationship between rural characteristics and young children's development has received little attention by research scholars (De Marco & Vernon-Feagans, 2013). Therefore, this section draws from a broad base of literature from the fields of early childhood education, early childhood special education, and sociology. It focuses mainly on ecocultural characteristics of rural communities without regard to their impact on children's development. Cultural and ecological characteristics are not distinguished in this section; however, definitions of each are provided below to facilitate an assessment of how they interact to shape the realities of families in rural communities. As indicated in Chapter I, ecological characteristics are defined as "aspects...which directly affect subsistence quest and protection from threats to physical survival" (Ogbu, 1981, p. 422). By contrast, culture is defined as a "complex system of common symbolic action patterns (or scripts) built up through everyday human social interaction by means of which individuals create common meanings and in terms of which they organize experience" (Edwards et al., 2006, p. 141).

The ecocultural factors described in this section are: family subsistence and financial base, with a subsection on poverty in North Carolina; accessibility of health and educational services; home and neighborhood safety and convenience; childcare tasks, children's play groups, networks and organizational involvement, domestic task and

chore workload (excluding childcare) and family division of labor, marital role relationships, and role of father and mother in childcare; and sources of child cultural influence, sources of parental information and goals, and community heterogeneity. Due to the paucity of literature as it relates to the target population for this study, six factors from the ecocultural domain framework (Gallimore et al., 1989) are grouped to form the fifth and sixth subheadings of this section.

Family Subsistence and Financial Base

In 2011, the poverty rate in rural areas in the United States was 17%, the highest it had been since 1993 (USDA, 2012). In rural areas, there are less diverse job opportunities than in other geographic areas (Bauer & Dolan, 2011). Job opportunities often include seasonal and part-time work. Moreover, during times of economic despair, such as the 2008 economic recession in the United States, rural economies are impacted first. Unfortunately, single mothers and fathers with children in these communities have the highest unemployment (Mattingly, Smith, & Bean, 2011). This coincides with the generational persistence of child poverty in rural communities (Mattingly, Smith, & Bean, 2011; O'Hare, 2009). About 36% of children in the rural South live in poverty (Mattingly, Bean, & Chaefer, 2011). Such poverty is also concentrated in Appalachia (Mattingly et al., 2011).

North Carolina ranks third among the states in the number of children (45%) who attend school in rural areas (Provasnik et al., 2007). In 2011, 35% of young children in North Carolina who lived in rural areas also lived in poverty (National Center for Children in Poverty, 2011a), compared to 30% in the United States (National Center for

Children in Poverty, 2011b). Job availability within rural counties in North Carolina is influenced by regional differences in economic specialization. For example, manufacturing, which makes up a large economic niche, is most prevalent in the northeast, northwest, and southern regions of the state, whereas recreational employment is prevalent in the west (Cromartie, 2013).

Accessibility of Health and Educational Services

Fewer children who live in rural communities childcare than children from non-rural communities are enrolled in childcare (Grace et al., 2011). Moreover, children from rural communities who are Black are less likely to have attended childcare the year before entering kindergarten than their counterparts who are White (13.6% and 35.4% of Blacks and Whites, respectively). Hallam, Rous, Grove, and LoBianco (2009) used data from a statewide early intervention billing and information system to determine differences in the level and intensity of services infants and toddlers received in relation to various demographic characteristics. They found that neither poverty nor location (i.e., urban as compared with rural) significantly affected the amount of services children received. However, the interaction between poverty and location had a negative impact in rural areas, resulting in fewer services, and a positive influence in urban areas, resulting in more services.

The reasons for such disparities are unclear. However, possible factors include transportation and proximity of childcare to work and home (Katrass, Zuiker, & Bauer, 2004; Walker & Reschke, 2004). Data from a sample of 441 mothers who lived in rural areas and had incomes below 200% of the federal poverty line were collected to

determine the relationship between the mothers' work characteristics and the type and quality childcare they used. The data indicated that most families from rural communities use informal care (i.e., not a center) (De Marco, Crouter, Vernon-Feagans, & The Family Life Project Key Investigators, 2009). Results indicated that mothers who worked night shifts used child center services less often. On the other hand, mothers whose children received high quality care were more likely to have workplace support and higher wages.

Haring and Lovett (2001), in a longitudinal study involving interviews of 23 families from rural communities, found over 30% of families received little or no prenatal care. A more alarming finding was that 86% of babies born to these families were air-lifted or transported in ambulances to neonatal intensive care units after birth. Seventy-two percent of these rural families reported that they had to drive over 50 miles to hospitals or specialty clinics for medical care. In some cases, this was due to local doctors not accepting Medicaid.

Even when rural families have access to services, the quality may be lacking. For example, in the previously mentioned study, all of the families received early intervention services (Haring & Lovett, 2001). A review of artifacts indicated that 76% of the early intervention providers working with the families had never in their career provided direct services to children with disabilities or infants who were medically fragile (Haring & Lovett, 2001). Mental health providers are sparse in rural communities (Grace et al., 2011). This may be a critical shortage area due to links between poverty and low social and emotional development (Semke & Sheridan, 2012).

Home and Neighborhood Safety and Convenience

Various protective factors exist within rural communities. For example, Grace et al. (2011) found that significantly more parents from rural communities (81.8%) than parents from non-rural communities (69.6%) believed that their neighborhoods were safe. However, within the rural subset of parents, parents who were Black (66.7%) were significantly less likely to believe their neighborhoods were safe than parents who were White (85.5%). A recent study on the effect of neighborhood conditions on young children's language development indicated that children's receptive language could be predicted by neighborhood safety (De Marco & Vernon-Feagans, 2013). This relationship was partially mediated by childcare quality. The results further indicated that collective socialization moderated the relationship between childcare quality and neighborhood safety. Thus, it seems that elements of cohesion have positive influences in rural communities.

Childcare Tasks, Children's Play Groups, and Networks and Organizational Involvement

Children from rural communities enroll in childcare less often and for fewer hours than children who live in a city, urban area, or town (Provasnik et al., 2007). An analysis of data from the National Household Education Surveys (NHES) shows that preschool-aged children from rural communities receive childcare from someone other than their parents at a rate comparable to their counterparts from urban communities (Swenson, 2008). However, the person providing care for children from rural communities is more often a relative, not a center. In many cases, children from rural communities have

multiple care arrangements (Grace et al., 2011). Reasons why a smaller proportion of families from rural communities than families from non-rural communities enroll their children in center-based childcare are unclear. However, research indicates that mothers from rural communities often work in part-time, low-paying jobs that offer few benefits (Ames, Brosi, & Damiano-Teixeira, 2006). The work hours that accompany these jobs are often inflexible and unpredictable (Walker & Reschke, 2004) and families do not qualify for receipt of childcare subsidy (Weinraub, Shlay, Harmon, & Tran, 2005).

The ramifications of the informal childcare arrangements that predominate in rural communities are unknown. However, evidence suggests that there is a lack of quality center-based childcare, and that center-based care can lead to positive child outcomes (Haring & Lovett, 2001). Haring and Lovett (2001) note that center-based care might be critical for children with special needs, whose parents do not know how to address their needs within daily activities. On the other hand, childcare arrangements in rural communities allude to a dynamic network of informal supports, which possibly serves as a protective factor. Eighty-three percent of the families in the study conducted by Haring and Lovett (2001) reported having informal social support (e.g., family, church). These supports appear to be instrumental in helping families in rural communities with childcare needs. Grandmothers in rural areas meet various childcare needs that are not met in formal childcare settings (e.g., transportation and caring for children while they are sick) (Bratsch, 2011).

Domestic Task and Chore Workload (Excluding Childcare) and Family Division of Labor, Marital Role Relationships, and Role of Father and Mother in Childcare

Over 75% of families from rural communities are comprised of married couples. Approximately 15% are headed by single mothers (USDA, 2004). It is unclear how such figures relate to parental tasks and roles in rural areas. However, several interesting findings exist. For example, despite the nontraditional work schedules of parents from rural communities, evidence exists that these families have routines that are similar to families from non-rural communities (Grace et al., 2011). Also, families from both communities have regular meal times. Moreover, families from rural communities are more likely to eat dinner together than families from non-rural communities. Regarding parent participation in school and community activities, Provasnik et al. (2007) found that parents from rural communities attended school events more often than parents from cities (74% and 65%, respectively). In addition, a larger percentage of parents from rural communities than parents from cities and suburbs took their children to athletic events outside of school (42%, 34%, and 38%, respectively).

Sources of Child Cultural Influence, Parental Information and Goals, and Community Heterogeneity

The availability of educational programs other than school-based programs is scarce in rural communities (Johnson, 2011). This might be tied to findings that families from rural communities often rely on religious communities for support (Haring & Lovett, 2001). On the other hand, parents' reliance on religious communities might be related to aspects of community heterogeneity. Semke and Sheridan (2012) explained

that, in rural communities, there is often stigma associated with the identification of child or family needs. Therefore, families in these communities often deal with problems internally rather than seeking help from professionals.

The literature presented in this section illustrates an array of ecological and cultural features in rural communities. These features may pose a positive or negative influence on parental engagement depending on how well families are able to form a niche with balance among features (resources and constraints) to lead to functional stability within the family. Whether or not families in rural communities are able to achieve a balance among features that leads to sustained engagement with young children who have disabilities is unclear. However, it is evident that families make decisions in light of the factors presented. The following sections set forth services afforded to children with disabilities and the role of parent involvement in children's developmental trajectories.

Early Intervention

A discussion of early intervention is important because it sets the tone for parent engagement with children with disabilities. The first federal law that mandated services for children with disabilities was the Education for All Handicapped Children Act (EAHCA) or PL 94-142 of 1975. The purpose of the law was to ensure that children with disabilities received a "free and appropriate public education." However, children ages 3 to 5 and 18 to 21 were excluded under this law, depending on state jurisdictions. In 1986, PL 94-142 was amended. The 1986 amendments, PL 99-457, extended special education services to infants and toddlers, with the intent of minimizing potential developmental

delays and, thus, reducing the need for and cost of future special education services (EAHCA, 1986). PL 99-457 mandated states to implement the Part B program for children ages 3–21, but the Part H program (now known as Part C) for children ages 0–3 was optional. That said, all states opted to participate in the Part H program. PL 99-457 was amended in 1990 and the name was changed to the Individuals with Disabilities Education Act (IDEA). This law has since been reauthorized twice, first in 1997 (IDEA, 1997) and then in 2004 (IDEA, 2004).

The Individuals with Disabilities Education Improvement Act (IDEA 2004) defines early intervention services as:

developmental services that—(A) are provided under public supervision; (B) are provided at no cost except where Federal or State law provides for a system of payments by families, including a schedule of sliding fees; (C) are designed to meet the developmental needs of an infant or toddler with a disability, as identified by the individualized family service plan team, in any 1 or more of the following areas [e.g., physical development; cognitive development]. (p. 113)

The law does not mandate how these services should be rendered. However, research indicates that they should not only take place in a “natural environment,” but also fully integrate the natural environment, which includes families and other caregivers.

Additional information about early intervention service delivery is provided in the next section.

Service Delivery

An Individualized Family Service Plan (IFSP) guides services provided under IDEA 2004. IDEA 2004 requires that each child receiving early intervention services have an IFSP to guide services that target child and family outcomes. The plan must

have several features, including a statement of the child's current level of development, a statement of the family's resources, priorities, and concerns relating to their child, expected measurable outcomes for the child, early intervention services needed to address the child's needs, the environment in which services will take place, the projected duration of services, the name of the service coordinator assigned to the family, and a preschool or other appropriate transition plan.

The approach with which the IFSP is carried out varies. However, IDEA 2004 states that "to the maximum extent appropriate to the needs of the child, early intervention services must be provided in natural environments, including the home and community settings in which children without disabilities participate" (IDEA, 2004, p. 118). In addition, early intervention has been greatly influenced by bioecological systems theory (Bronfenbrenner, 1986, 2005). This theory assumes that children's development is understood best in relation to the family and greater contexts in which they live. Thus, an approach that fosters family participation is preferable. However, two overarching service delivery trends have developed, traditional services and participation-based services (Campbell & Sawyer, 2007). Traditional services are (a) child-focused, (b) intended to address deficits, and (c) planned and implemented by interventionists. The participation-based services are (a) family-centered, (b) intended to promote participatory learning, and (c) facilitated by interventionists and directly scaffolded by parents to promote learning in naturally occurring activities. In 2007, Campbell and Sawyer conducted a study in which they used two different measures to distinguish between traditional and participation-based service delivery approaches.

After coding videos from 50 home visits, they concluded that 70% of the home visits entailed traditional characteristics and 30% had participation-based characteristics.

According to findings based on the Natural Environments Rating Scale (Campbell & Sawyer, 2004), parents interacted with children in 100% of participation-based visits.

However, in only 31% of traditional visits did parents interact with their children.

Parents' role during the majority (63%) of the traditional visits was as *observer*. Analysis of the second measure, the Home Visit Observation Form (McBride & Peterson, 1997), also indicated that parents' roles differed between traditional and participation-based visits. They found parent interactions to be significantly lower and watching/observing significantly higher in the traditional visits than in the participation-based visits. This trend highlights the need for heightened expectations for parent involvement in their children's education.

In a more recent study, researchers conducted a randomized controlled trial involving children who were developmentally delayed or at-risk (Hwang, Chao, & Liu, 2013). The children were randomly assigned to either a routines-based intervention or a traditional intervention. The routines-based intervention and traditional intervention aligned closely to the participation-based and traditional approaches, respectively.

However, additional information regarding the nature and implementation of interventions was described. The routines-based intervention included interventions that were designed in collaboration with parents and, consequently, embedded in family routines. The traditional intervention, on the other hand, involved interventions that were selected from a curriculum guide and not embedded in family routines. The research

design included a 3-month baseline, a 6-month intervention, and a 6-month follow-up period. After the intervention period and the follow-up period, children in each group were assessed to determine their current functional and developmental outcomes.

Children who received the routines-based intervention showed significant improvements in self care and social functioning. However, children who received the traditional intervention showed no significant improvement. Thus, findings indicate that early intervention services designed with consideration of the family context are better able to improve child outcomes than those that focus primarily on the child.

In general, researchers believe that early intervention has not kept up with policy or with advances in research on effective early intervention practices, (Childress, 2004; Dingfelder & Mandell, 2011; Shonkoff, 2010. Bruder (2010) indicates that the early intervention program is in a stagnant state due to changing needs within families and the early intervention system's failure to adapt to these needs. Another perspective, which resonates true, is that the wording of PL 99-457 Part H disengaged the field of early childhood special education (ECSE) from the foundational principles that guided what early intervention was envisioned to be (Dunst, 2012). This disengagement, which Dunst refers to by the term parapatric speciation, has manifested in several ways. First, there has been a shift toward the provision of services without regard to optimal conditions for learning. Second, early intervention services have been decontextualized in a way that limits the focus on functional outcomes for children and their families. Lastly, there has been a lack of focus on best practices with child and capacity building with their parents.

The history and current state of early intervention paint a picture of parents' expected roles regarding early intervention services for their children. Furthermore, research indicates that it is important to design interventions that involve family participants and are embedded in families' everyday activities. However, there appears to be a disconnect between research and practice regarding parents' active engagement in the design and implementation of interventions for their children. Parent involvement in the design and implementation of interventions is especially important in rural areas where limited resources (such as few information sources) and other constraints (such as insufficient work flexibility) are likely to exist. The next section is used to directly explore parent engagement.

Parent Involvement

Parents play a key role in the development of young children (Goldberg, 2014). Thus far, the term parent engagement has been used to describe parents' participation in developmental activities. This term was chosen because it evokes a sense of interaction. In fact, authors "use the word engagement to expand our understanding of involvement to also include parents' orientations to the world ... his or her relationships with other individuals, the history of the event, and the resources available..." (Barton, Drake, Perez, Louis, & George, 2004, p. 4). However, in this section, I use the term parent involvement because the literature predominantly used this term.

Parent involvement has been a key principle of early intervention since the passage of PL 99-457 and in prior early intervention programs dating back to the early twentieth century, when the focus was parent-child interaction (Dunst, 2012). At the core

of the framework guiding ECSE/EI is family-centered practice, the premise that families should be active participants in special education programming (Bailey et al., 2012; Epley, Summers, & Turnbull, 2010). The salience of parent involvement is highlighted by Dunst, Boyd, Trivette, and Hamby (2002), as they describe criteria for differentiating family-centered models from other family-oriented models. They state:

Families are viewed [as] fully capable of making informed choices and acting on their choices. Professionals view themselves as agents of families who strengthen existing and promote acquisition of new skills. Interventions emphasize capacity building and resource and support mobilization by families. (p. 223)

Currently, Part C continues to emphasize the importance of families. For example, there is a requirement for “a family-directed assessment of the resources, priorities, and concerns of the family and the identification of the supports and services necessary to enhance the family’s capacity to meet the developmental needs of the infant or toddler” (IDEA, 2004, p. 118). Professional recommended practices go a step further to define parents’ role during ECSE/EI service delivery. The Division of Early Childhood (DEC) (2014) recommends that: “Practitioners representing multiple disciplines and families work together as a team to plan and implement supports and services to meet the unique needs of each child and family” and “Practitioners and families work together as a team to systematically and regularly exchange expertise, knowledge, and information to build team capacity and jointly solve problems, plan, and implement interventions” (p. 14).

Parent involvement is particularly important in EI because research indicates that it often mediates children’s developmental outcomes (Fantuzzo, McWayne, Perry, &

Childs, 2004; Gonzalez-DeHass, Willems, & Holbein, 2005; Kellar-Guenther, Rosenberg, Block, & Robinson, 2014; Schlee et al., 2009). In fact, Fantuzzo, McWayne, Perry, and Childs (2004) investigated the relationship between various dimensions of parent involvement and child outcomes for 144 children enrolled in Head Start in urban settings. They found that family involvement in the home was the best predictor of child outcomes as well as children's motivation to learn, attention to tasks, receptive language, and socio-emotional skills.

Such findings support the notion that parents should be the ones implementing interventions in the home and community, not interventionists (Jung, McCormick, & Jolivet, 2004; McWilliam, 2012). In a study that compared levels of parent involvement across home, community, school, and outpatient settings, Kellar-Guenther, Rosenberg, Block, and Robinson (2014) found that, when early intervention services are provided in the home, parents were more involved compared with services provided in childcare settings. This is not surprising because parents are more likely to be a part of the early intervention experience if services are provided in their homes. So, in short, if early intervention services are provided in the home, parents have more opportunities to be involved. And, the more parents are involved, the greater their ability to impact their children.

Several studies shed light on the benefits of parent involvement. When parents implement interventions, one of the major benefits is the increased likelihood that they will seize learning opportunities (Jung, McCormick, & Jolivet, 2004). Unlike a professional who usually has the opportunity to intervene one hour per week, parents

have the opportunity to take advantage of multiple opportunities over an extended period of time. However, for parents to have a positive impact on their children when opportunities arise, professionals have to understand the contexts in which parenting occurs and the systems that influence it as well as effectively provide support within those contexts. In a comprehensive literature review, Kingsley and Mailloux (2013) sought to determine the effectiveness of service delivery models used with children receiving occupational therapy. They found that service delivery models that included a parent participation component resulted in positive child outcomes. Kingston, Huang, Calzada, Dawson-McClure and Brotman (2013) conducted a study that aligns more closely with the variables in this study. They collected data from families of 171 four-year-olds from urban areas to determine the impact of parent involvement on school readiness outcomes. They found that parent involvement moderated the effects of family and neighborhood resources on social and emotional aspects of school readiness. Additionally, high parent involvement was inversely related to behavior problems among children of single parents and children who lived in areas with low childcare access.

These research findings give credence to the idea that families should be the target actors in efforts made to meet children's developmental needs. Families reinforce the notion that ecological and cultural systems around the child are important for children's development. Moreover, they indicate that the degree to which parents are involved with their children seems to be directly related to improvements in child outcomes.

Conclusion

The research described in this chapter underlines the significance of this study by providing insights into the importance of contextual considerations for children with disabilities, including those who live in rural communities. Due to the number of rural counties in North Carolina and the number of children living therein who have disabilities, an investigation of the ecological and cultural factors that exist across rural community and family contexts is warranted to provide insights on how to better serve these families and others with similar characteristics.

Guided by ecocultural theory, which embodies strengths-based perspectives, this study seeks out parents' capacities to engage in various daily activities that support their children's development. The early intervention program is somewhat young. Fortunately, it started at a time when strengths-based paradigms were beginning to emerge (Dunst & Trivette, 1988; Weisner, 1984). Such frameworks have provided a lens through which families' abilities are acknowledged and supports designed to assist parents in meeting their children's needs can be established.

In closing, the social lives of families are intricate. So, although parent involvement in the development of young children has gained attention by researchers across recent decades, there is still much to examine, including how experiences of families from rural communities affect parents' ability to engage in various activities with their children, particularly children with disabilities and/or developmental delays. To understand how parents are involved in their children's lives or how they might become involved, their regular activities need to be examined. Thus, this study is intended to

further IDEA's original vision to ensure early intervention services that meet the developmental needs of all children with developmental delays and/or disabilities, including those living in rural areas.

CHAPTER III

METHODOLOGY

This study uses quantitative and qualitative methodologies, collectively referred to as mixed methods, to better understand two distinct, yet complementary constructs, ecocultural influences and sustained engagement. A mixed methods design is useful in revealing the everyday experiences parents have with their children. Parent engagement has gained much attention in the field of early childhood special education and early intervention (ECSE/EI) (Dunst, 2007; Fantuzzo et al., 2004; Gonzalez-DeHass et al., 2005; Kellar-Guenther et al., 2014). However, few studies have examined parents' sustained engagement in developmental activities (Weisner et al., 2005). Moreover, the existing ecocultural framework developed by Weisner (1984) to understand ecological and cultural factors that affect parents' sustained engagement in early learning opportunities presents a set of *universal domains* that impact all families. This framework was applied to this research as a lens in which to examine the unique experiences of parents from rural communities.

The methods described in this chapter provide insights about the interconnectedness of ecocultural influences and the engagement patterns of parents in four rural counties in North Carolina who have infants or toddlers with identified disabilities or developmental delays. To gain an in-depth picture of these dynamics, I gathered data from a combination of focus groups and individual surveys with parents of

children participating in North Carolina's early intervention program. Additionally, I collected field notes and demographic data to inform the interpretation of findings. I used focus group interviews to gather rich, descriptive data about the ways in which ecocultural factors facilitate and/or pose a barrier to sustained engagement in learning opportunities. I used survey data to provide descriptive statistics about ecocultural variables that coincide with the interview data and the importance of a range of early learning opportunities to parent participants and their child with a disability, as well as parents' frequency of engagement in the early learning opportunities. Thus, survey data serves two purposes: (a) complementarity and (b) triangulation (Denzin & Lincoln, 2011). Regarding the former, survey data provides a comprehensive understanding of sustainability. Secondly, it triangulates focus group findings. These sets of data inform the following research question: What ecocultural factors of families from rural communities affect parents' sustained engagement in early learning opportunities?

Research Design

This study uses a mixed methods design. Multi-method designs that incorporate qualitative and quantitative methods are increasingly used in social sciences to gain in-depth understandings of social constructs (Linhorst, 2002). For example, Brandwein and Filiano (2000) expressed that their quantitative findings "provided overall numbers and frequencies but raised questions of why, how, and what happened in the lives of individual women" (Brandwein & Filiano, 2000, p. 226). They further explain how qualitative inquiry can be incorporated in research to more fully understand quantitative

data about studied populations. Likewise, both quantitative and qualitative methods are needed to more fully answer the research question posed in this study.

The mixed methods approach that most closely fits this study is the concurrent transformative mixed methods research approach (Creswell, 2013). The concurrent transformative mixed methods design has two distinctive features: (a) quantitative and qualitative data are collected concurrently, and (b) methodological decisions are informed by theory (Creswell, 2013). This design lends itself to the aims of this study for the following reasons. First, it places emphasis on theory. This study is deductive in nature; therefore, it was guided by theory. Next, the emphasis of the methods used is dependent on the theory guiding the research. In this study, qualitative methods were prioritized. Finally, concurrent transformative mixed methods design supports quantitative data triangulation by allowing data to be analyzed separately, and then compared during the interpretation phase. Triangulation, which is discussed in the last section of this study, is one means of enhancing the trustworthiness of findings (Creswell & Planko Clark, 2011). The concurrent transformative mixed methods design used in this study is depicted in Figure 2.1 (Creswell, 2013). As depicted, qualitative and quantitative data were collected and analyzed separately. Results for each are reported separately. Afterwards, they are compared and contrasted and, then, interpreted together.

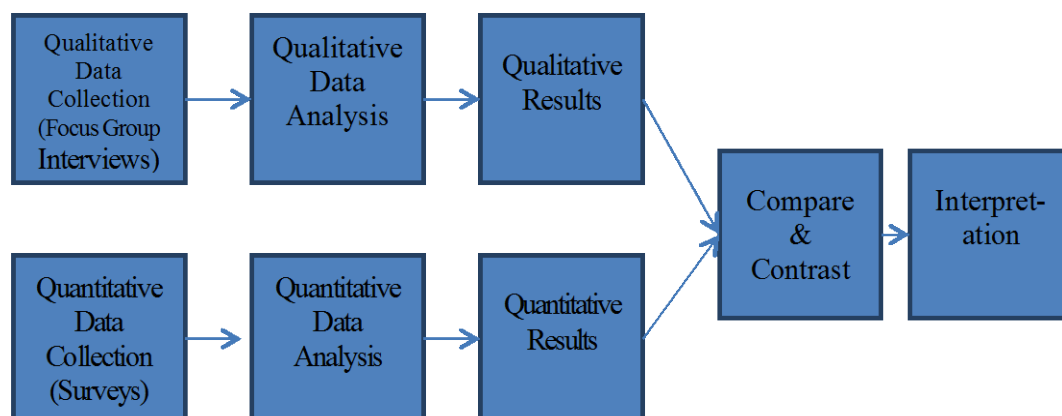


Figure 2.1. Concurrent Transformative Mixed Methods Design.

Together, the qualitative and quantitative dimensions of this study lend a contextualized understanding of the process-oriented dimensions of family engagement as well as potential relationships between ecocultural and engagement variables. To ascertain parent perspectives on several dimensions of family life—namely, the ecocultural factors with which families that have infants or toddlers with disabilities interact—descriptive qualitative data are essential. Ecocultural theory emphasizes the importance of understanding ecological and cultural variability among families (Gallimore, Goldenberg, & Weisner, 1993). Qualitative research is especially useful in gaining insights about the experiences of selected groups of people (Leech & Onwuegbuzie, 2007). More importantly, qualitative inquiry is essential to understanding family life (Weisner, 2014). In order to understand parents' engagement patterns alongside ecocultural factors, a quantitative inquiry was appropriate. The quantitative dimension of this study allows sustainability to be examined. In addition, quantitative data allow an analysis of potential relationships between ecocultural factors and sustained engagement. I analyze qualitative and quantitative data independently in order to

ascertain the unique insights afforded by each. Afterwards, I compare the two types of data to establish areas of convergence and divergence and to interpret the data together .

Qualitative Method

The qualitative method chosen for this study was focus groups. A focus group can be defined as “a group of individuals selected and assembled by researchers to discuss and comment on, from personal experience, the topic that is the subject of the research” (Powell & Single, 1996, p. 499). Focus groups are an appropriate method of inquiry when little is known about a topic and a researcher would like to gain an in-depth understanding (Byers & Wilcox, 1991). The specific focus group design that was used in this study is termed “single category focus group design” (Krueger & Casey, 2009). This design is used to gather information several times with similar groups in order to identify trends in parent identified ecocultural influences as well as engagement patterns (Krueger & Casey, 2009).

Focus groups generally have several advantages over other forms of qualitative research. These include interactional quality or synergy (Acocella, 2012), range of experiences shared, and low moderator input (Powell & Single, 1996). Although a lack of confidentiality might be considered a disadvantage, Kamberelis and Dimitriadis (2005) identified the lack of confidentiality as advantage in focus groups because there is often a sense of heightened sensitivity among homogeneous participants. The disadvantages are the emergence of consensus among group members, to the exclusion of differences, and unequal sharing among group members (Acocella, 2012). In this study, I minimized

disadvantages through the use of ground rules, which are discussed in the procedures section below.

Quantitative Method

The quantitative method chosen for this study was surveys. “A survey is a system for collecting information from or about people to describe, compare, or explain their knowledge, attitudes, and behavior” (Fink, 2003, p. 1). In this study, a closed-question, ordered response survey format was used to gather quantitative data. Surveys are often used in conjunction with qualitative methods to corroborate findings (Creswell, 2013). Surveys were used to corroborate the qualitative findings from this study because they align well with many of the methodological procedures within qualitative design (e.g., purposive sampling and face-to-face administration) (Burns et al., 2008). Survey details are described below in the measurement section.

The remainder of this chapter is organized into the following sections: (a) site description, (b) participants, (c) measures, (d) data collection, (e) data analysis, and (f) trustworthiness. The first two sections describe characteristics of the sites where data was collected and the participants from which data were collected. I describe the measures that were used in this study next. They include a demographic form, focus group protocol, field notes, and survey. Next, I outline data collection procedures and analysis processes. I describe analyses that will be used to analyze demographic data, focus group transcripts, field notes, and survey data. The final section, trustworthiness, describes steps taken to ensure the dependability and credibility of findings.

Site Description

The focus group participants lived in rural areas in which the population per square mile was 250 people or less. I targeted three Children's Developmental Services Agencies catchment areas, or geographic locations, to represent the eastern, central, and western parts of North Carolina. Then I identified target counties in each catchment area as Surry County in western North Carolina, Moore County in central North Carolina, Lenoir County in eastern North Carolina, and Jones County in eastern North Carolina. Parents from Lenoir and Jones Counties joined to represent the eastern part of North Carolina. These counties were each rural according to the North Carolina Rural Economic Development Center (n.d.) guidelines presented in Chapter I. Additionally, only rural counties bordered these target counties. The poverty rates for Surry, Moore, Lenoir, and Jones Counties were 21.3%, 14.4%, 21.7%, and 20.7%, respectively (US Census, 2013). Henceforth in this chapter, counties will be referred to according to their geographic locations.

Participants

Participants were parents of children ages six months to three years who were currently enrolled in the North Carolina Infant-Toddler Program (the state's early intervention program under IDEA 2004, Part C) and who lived in the target rural counties. The selection criteria for the study included parents (a) who lived in one of the targeted rural counties, (b) who had a child enrolled in the North Carolina Infant-Toddler Program, and (c) whose enrolled child was six months to three years old.

These criteria, along with their justifications, are listed in Table 3.1. The first criterion was essential because ecocultural factors and parents' engagement patterns in rural areas are the topic under investigation. Enrollment in the North Carolina Infant-Toddler Program ensured that the family had a child with an identified disability or delay. Children enrolled in the program who were younger than six months old were excluded because the early learning opportunities appropriate for them are fewer than for older children. Participants who did not speak English were excluded because English is the language of the study. Finally, participants younger than 18 years old were excluded due to their inability to provide informed consent.

Table 3.1

Sampling Criteria and Justification

General Criteria	Specific Criteria	Reason for Selection
Identified Delay or Disability	Part C Enrollee	IDEA (2004), Part C, targets children with identified delays and disabilities, and also seeks to “enhance the family's capacity to meet the developmental needs of the infant or toddler” (p. 118).
Child's Age	6 months–35 months	Young children vary greatly in their development; thus, very young children with disabilities or developmental delays may have less capacity to engage in some learning opportunities and fewer appropriate opportunities overall (Coster & Khetani, 2008).
Live in a Rural County	Receive Part C Services within Target Catchment Area: New Bern Sandhills Winston-Salem	These cities (a) represent the eastern, central, and western parts of the state, respectively, and (b) are bordered by rural counties on all sides

Parents were recruited using purposive sampling (Burns et al., 2008). Qualitative researchers endorse purposive sampling because it yields a sample that is well positioned to answer the research question (Marshall, 1996). Moreover, purposive sampling is appropriate when forming focus groups because participants must have a set of common characteristics (Krueger & Casey, 2009). This sampling technique allowed the study to focus narrowly on the stakeholders, settings, and processes that are central to this study (Miles, Huberman, & Saldaña, 2013) and to relate findings to a group of participants with particular homogeneous characteristics (Maxwell, 2008).

Participant Response Rate

This section describes the participant response for this study. The ideal size for academic focus groups is five to eight participants; however, smaller groups with four to six participants are commonly used (Krueger & Casey, 2009). Given the focus on rural counties, small groups of three to eight participants participated in the focus group portion of this study. The recruitment period spanned from October 2014 to April 2015. During that time, 25 parents provided site partners “Permission to Contact” forms, indicating that they were interested in participation. Seventeen of these families (68%) eventually participated in the study (four from Moore County, eight from Surry County, two from Lenoir County, and one from Jones County). Due to the time lapse from the beginning until the end of recruitment, two of the participating families had children who had turned three at the time of data collection. These families were allowed to participate, because the criteria of enrollment in the North Carolina Infant-Toddler Program was to ensure that families had a child with an identified disability or delay per

North Carolina's state guidelines. Three of the 17 families, one from Moore County and two from Lenoir County, were not able to participate in the focus group portion of the study, but expressed interest in completing the survey. Thus, the total number of focus group participants was $N=14$ and the total number of survey participants was $N=17$.

Participant Demographics

This section describes the demographic characteristics of participants.

Demographic data are presented on participants in individual catchment areas and across catchment areas in order to assess homogeneity. The discussion of demographic findings focuses on two areas, individual characteristics and family characteristics. Together, these data demonstrate the degree to which participants share the same characteristics and experiences.

Total sample characteristics. A demographic form was used to elicit participants' characteristics (see Appendix C). Summaries of descriptive statistics gathered from the sample of all 17 participants are provided in Appendix D. Participants' ages ranged from 20 to 73 years old, with a mean and median age of 33 and 29, respectively. Fifteen participants were mothers, one was a father, and one was a great-grandfather. The father of one child and sister of another child accompanied two of the participants to assist them during the focus group discussion. The majority of participants were married (64.71%), though some were single (29.41%). Fourteen of the participants (82.35%) were White. The remaining three participants identified as Black, Hispanic, or two or more races. The number of people living in participants' households ranged from two to eight, with a mean, median, and mode of 4.76, 4, and 4, respectively.

The yearly household income of families ranged from under \$15,000 to over \$75,000, but did not exceed \$100,000. Seventy-one percent ($n=12$) of families had incomes under the poverty threshold given their family size.

Demographic data related to the development of participants' children who were enrolled in the North Carolina Infant-Toddler Program revealed that most parents (52.94%) had been referred to the program by their child's pediatrician. Most (52.94%) also indicated that their child had a disability label. Parent-reported disability labels included autism (11.76%), cerebral palsy (5.88%), congenital heart defect (5.88%), developmental delay (17.65%), and Down syndrome (11.76%). The remaining 47.06% of participants indicated that their child had no disability label. In terms of the services the children were receiving through the early intervention program, the majority of participants (76.47%) indicated that their children were receiving speech therapy. A smaller percentage of participants indicated that their children were receiving physical therapy (47.06%), service coordination (35.29%), early intervention (35.29%), or occupational therapy (29.41%). The children's ages ranged from 1 to 3, with a majority of 2-year-olds (64.71%).

Catchment area comparisons of individual characteristics. A comparison of participants by catchment area indicate that groups have various similarities. Across catchment areas, the majority of participants were married (75%, 62.5%, and 60% from central, western, and eastern catchment areas, respectively) with approximately five people living in the household. All but two families had additional children. Also, all but two families had children, in addition to the child with a disability, who were under

the age of 18 living in the home. However, across catchment areas, few had additional children under the age of five (percentages of participants in central, western, and eastern catchment areas were 25%, 25%, and 40%, respectively). Another similarity is that the majority (75%, 100%, and 60% in central, western, and eastern catchment areas, respectively) of participants were White. The participant characteristic that differed across catchment areas was yearly family income. Across catchment areas, participants reported having an average yearly household income in the range of \$15,000 to \$24,999 a year. However, average earnings by catchment area varied. Participants from Central North Carolina earned \$25,000 to \$34,999 per year. Those from Western North Carolina earned about \$15,000 to \$24,999 per year. Finally, participants from Eastern North Carolina earned less than \$15,000 per year. There were also similarities and differences among groups related to the enrollment of participants' children in early intervention services. At least 75% of participants from each catchment area had children who were receiving speech therapy. Additionally, most children in each catchment area were receiving a service in addition to speech therapy. Also, as indicated above, most parents were referred for services by their child's pediatrician. However, one difference among catchment areas was that only 25% of parents from Central North Carolina were referred by a pediatrician compared to about two-thirds of families in both western and eastern catchment areas. Of the 47.06% of participants who indicated that their child did not have a disability, 75% were from Western North Carolina (compared to none in Central North Carolina and 40% in Eastern North Carolina). The remaining 25% of participants indicated that their child had a developmental delay rather than a disability.

Catchment area comparisons of whole family characteristics. In addition to the demographic information discussed above, I gathered demographic data on family characteristics that align with the ecocultural theory framework to assess homogeneity across groups with regard to cultural and ecological experiences in their communities. Participants were asked to check “yes” or “no” to indicate whether each of 12 items applied to their family (see Appendix C). Responses are depicted in Figure 4.1.

Sixty percent or more of combined participants ($N=17$) marked “yes” for 91.67% ($n=11$) items, indicating that a variety of ecocultural features in their communities serve as resources. One item, related to formal supports, was marked “no” by most (52.94%) of the participants. At least 75% of parents in each catchment area marked “yes” for items pertaining to access, safety, home tasks, childcare tasks, marital relationship, cultural impacts, information/knowledgebase, and community characteristics. At least 50% of parents in each catchment area marked “yes” for the item pertaining to work, playmates, and father involvement. As few as 20% of participants by catchment area marked “yes” for the item that pertained to formal support.

Although each catchment area’s participant responses generally indicated that their family characteristics included similar ecocultural features, responses related to several items varied. The largest differences in participants’ responses were to whether or not their child with a disability had playmates that were the same age and whether or not the family was involved in a support group (including, church, parent groups, etc.) or received support from extended family. Regarding same-aged playmates, 87.5% of

parents from Western North Carolina indicated that their child had playmates that were the same age, compared to 60% in Eastern North Carolina and 50% in Central NC.

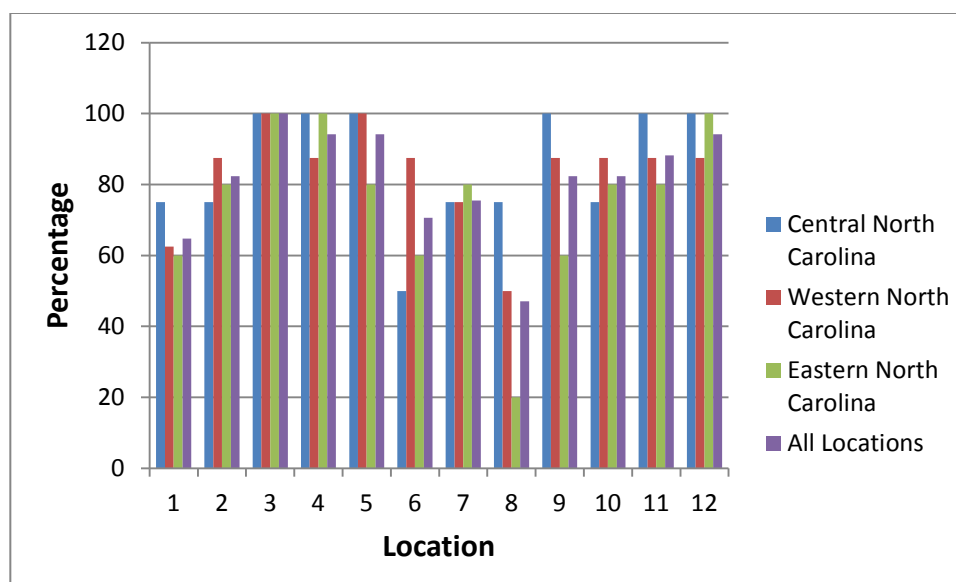


Figure 4.1. Family Characteristics by Catchment Area and Total Sample (N=17).

Regarding involvement in a support group, or formal support, responses across catchment areas varied. Fifty percent of participants from Western North Carolina, just above $M=47.06$, indicated involvement in a support group. Seventy-five percent of participants from Central North Carolina and 20% of participants from Eastern North Carolina, relatively high and low percentages to $M=47.06$, indicated the same. Regarding informal supports, overall, 82.35% of participants indicated that they had informal support from extended family. Percentages were 87.5%, 100%, and 60% for western, central, and eastern catchment areas, respectively.

Overall, the individual participants, family characteristics, and the counties in which they lived were similar based on the descriptive statistics. There were similarities

across all catchment areas, except in regard to income, children's disability label and referral source, the age of children's playmates, and engagement with formal and informal supports.

Measures

In this study, I collected focus group data, survey data, field notes, and demographic data. Each source of data has a unique purpose. The surveys provide statistics on two dimensions of sustainability, whereas the focus groups provide contextual understanding (Morgan, 1996). Thus, using both focus groups and surveys affords the opportunity to explore ecocultural influences and identified dimensions of sustainability broadly and also to capture the relationship between them (Morgan, 1996). I use field notes and demographic data to provide meaningful information that assists in establishing trustworthiness.

Frameworks used to develop the primary measures for this study have been validated by empirical research (Gallimore et al., 1989). In order to understand their structure and relevance to this study, it is important to review several theoretical assumptions. First, sustainability has four features: social-ecological fit, congruence among family member's interests, meaning to the family, and predictability within the family (Weisner et al., 2005). A sustainable routine is one that "1) fits with available resources; 2) has meaning with respect to goals and values; 3) balances inevitable family conflicts; and 4) provides some stability and predictability for family members" (Weisner et al., 2005, p. 49). Second, early learning opportunities are the unit of analysis to measure sustainability across the mentioned dimensions (Weisner et al., 2005). The term

“early learning opportunities” is used to depict a broad range of activities and routines associated with young children’s learning and development (Dunst et al., 2000).

Examples of early learning opportunities are family routines, child routines, and play routines (see Appendix B for a full list). The more families are able to sustain early learning opportunities, the more likely their children are to have positive outcomes.

Therefore, although this study aims to identify and examine the ecocultural factors in rural communities that impact the frequency at which parents engage in early learning opportunities, it is also important to examine the influence of ecocultural factors in relation to other features of sustainability in order to gauge interactions that may have existed. The measures for this study were designed with each of these assumptions in mind. A further discussion about how theory informed the development of each measure is presented below.

Demographic Form

Demographic data can be used to ascertain homogeneity among participants; however, it can also be used to ensure that participants represent a range of ideas about a given topic (Sandelowski, 1995). This study’s demographic form was designed to elicit a range of participant characteristics that highlight similarities and differences. The demographic form included 12 items grouped under the following content categories: parent information (6 items), child’s developmental information (5 items), and family characteristics (1 item) (see Appendix C). Under the first two categories, standard information such as age, race, income, and early intervention services received were elicited. The last section was designed to narrowly capture characteristics of the family

that align with ecocultural domains, and thus to reflect the composition of the family “niche.” For example, in relation to the accessibility domain, participants were asked, “Are health or education services within 10 miles of your home?” The data collected from this measure established homogeneity within and across focus groups and also in broadly characterized the sample from which data were collected, with attention to individual- and family-level characteristics.

Survey Measure

Because early learning opportunities are the unit of analysis for sustainability and because the presence of early learning opportunities are thought to mediate the influence of domains on child outcomes (Gallimore et al., 1989), it is important to understand the learning opportunities that parents provide for their children. Consequently, I designed a survey that encompasses domain features and also empirically validated early learning opportunities (Dunst et al., 2000). The survey was designed to provide a comprehensive understanding of the influence of ecocultural factors on engagement patterns in early learning opportunities. The survey captured sustainability by focusing on clusters of identified early learning opportunities available to young children (see Early Learning Opportunity Clusters in Appendix B) (Dunst et al., 2000). Dunst et al. (2000) used survey data to determine naturally occurring early learning opportunities for young children, as well as overarching categories for clusters of opportunities. Identified categories include family routines, parenting routines, child routines, literacy activities, physical play, play activities, entertainment activities, family rituals, socialization activities, family celebrations, and gardening activities. Three fit indices, the comparative

fit index and the Bentler-Bonett normed and non-normed indices, reveal that fit indices for the overall model were between .82 and .85. Individual items had standardized structure coefficients, which measured effect size, ranging from .32 to .76. The modified survey for this study included the three items with the highest standardized structure coefficients from 10 of the 11 categories, which resulted in a range of .43 to .76. I omitted one category, family celebrations, because it represented activities that naturally occur occasionally (i.e., holiday dinners, family members' birthdays, decorating the home for holidays). Therefore, all items used in the survey, as well as the overarching categories, were validated.

The survey used in this study had two parts and five sections (see Appendix E). Part 1 included 30 items that represented early learning opportunities (ELOs) within the family or home setting. Each item was rated on three different 6-point Likert type scales (one set of 6-point ratings for each of three sections that are explained in the data analysis) that enabled data to be converted from continuous to categorical data during data analysis. The first section directed parents to rate how often they engaged in each of the ELOs. This section provides insights about predictability within the family as well as how meaningful each opportunity is. Sections two and three asked parents to rate the importance of engagement in each early learning opportunity to the parent and child, respectively. Individually, they captured meaning and combined, they captured congruence between family members.

Part 2 of the survey included 26 items, which represent factors across the 12 ecocultural domains. They were rated on a 5-point Likert type scale with 1 meaning that

the factor was identified as a constraint and 5 meaning that the factor was identified as a resource. This scale was designed to capture social-ecological fit. Together, parts one and two of the survey highlight the extent to which sustainability features exist within the niche of families from rural communities.

Focus Group Interview Protocol

The ecocultural domain framework developed by Gallimore et al. (1989) guided the semi-structured focus group interview protocol. The development of the framework was informed by a review of family ecology and cross-cultural research as well as an analysis of case files involving children with developmental delays. The domains, which are hierarchical in nature, are purported to reflect family life for families who have children with disabilities. The focus group interview protocol for this study included an introductory question and one question for each of the twelve domains to prompt parents to describe how each domain facilitates or poses a barrier to their engagement with their children (see Appendix F). In other words, the protocol was designed to capture whether each ecocultural domain presents resources or constraints for families. Although the main constructs in the interview protocol remained constant, the protocol evolved with each subsequent focus group. After the first focus group, questions were reworded to elicit additional information about parents' engagement alongside ecocultural domains. For example, question one was reworded to read, "In what activities are you able or not able to engage in with your child due to work conditions?" rather than "How do the work conditions facilitate or act as a barrier to your engagement with your child?" Likewise,

initial follow-up probes evolved to ensure that parents shared information related to all features of sustainability.

Field Notes

Taking field notes is established as a best practice in qualitative research (Krueger & Casey, 2009; Patton, 2002). As described in detail below, a notetaker took notes during the focus groups. These efforts mainly served to identify speakers in the audio recordings and to capture key themes in case the two audio recorders failed or produced low-quality recordings. In addition to these efforts, I took a set of standard notes while serving as moderator for each focus group; these notes included the name of the study, the focus group date and time, the location, the number of participants, names of the moderator and note taker, and a seating diagram (see Field Note Guide in Appendix G) (Krueger & Casey, 2009). I also took additional notes during each focus group to monitor comments and prompt discussion.

Procedures

The study received approval for the procedures outlined in this section from the University of North Carolina at Greensboro Institutional Review Board (Appendix H). Below, I describe details about the recruitment and measure procedures that were used in this study. Data collection and analysis procedures for each measure are depicted in Appendix I.

Participant Recruitment

Parents who met the recruitment criteria were invited to participate in the study. Once potential participants were identified, they were asked to complete a permission to

contact form (see Appendix J), which site partners collected. To ensure that parents had the required characteristics, those who granted permission to be contacted were called and screened for participation eligibility (see Screening Form in Appendix K). Those who were interested in participating were asked to share their availability to meet (e.g., mornings, afternoons, weekdays, and weekends). A written invitation (see Appendix L) was sent at least two weeks prior to the scheduled focus group meeting to parents who met inclusion criteria and were interested in participating. One week prior to the scheduled meeting, they were called to confirm their attendance. Two days prior to the scheduled focus groups, parents were called and given a reminder of the scheduled time and place for the meeting. Parents who then provided informed consent during the focus group meeting were included in the study.

Preliminary Procedures

Site partners from local agencies collaborated to determine specific data collection locations for each set of participants. Consequently, each focus group took place in the fellowship hall of a church in each catchment area. Childcare accommodations were offered to parents participating in each focus group. Childcare was provided by staff from supporting agencies in each catchment area. Parents who needed childcare were asked to arrive to their focus group site 30 minutes prior to the data collection start time in order to get their children signed in. Once all parents settled children, or at the designated data collection time, whichever came first, parents were asked to provide informed consent for participation in the study. At each of the three

focus group sites, seating was arranged at tables so that participants and the moderators were facing each other. One set of data was collected from each location.

Demographic Form and Survey Procedures

All parents consented to participate in the study ($N=14$). Once consent forms were collected, parents were asked to complete a brief demographics form, which took about 15 to 20 minutes. I answered questions as needed. Once complete, participants handed in their demographics forms. Then participants completed the survey, which was expected to provide them with awareness of the scope of the study. Survey completion took about 30 to 40 minutes. After all participants were done with the survey, I read directions for parts one and two and opened the floor for questions. Afterwards, participants completed the survey. Once participants began to complete of the survey, I answered additional questions posed by individual participants. Additionally, I read questions aloud to participants who requested assistance. Once all surveys were completed, participants placed them in a sealed envelope.

Focus Group Procedures

Planning. During each focus group, a notetaker, in addition to the researcher, was present to assist with logistics (Krueger & Casey, 2009). The notetaker had least four years of experience working directly with children and families as a public school English teacher. Additionally, she spoke and understood English well and wrote legibly. Prior to the first focus group, she signed a confidentiality statement. She assisted with all three focus groups to ensure consistency in the field notes and procedures for collecting data. She was trained prior to the first focus group in her roles and responsibilities, which

were to assist with taking notes and with managing additional logistical elements as discussed below. To assist in recording notes about key parts of the discussion, I provided her with a note-taking guide, which was formatted to align with the interview protocol. The notetaker was asked to record participant names next to comments so that they could be referenced, if needed, during data analysis. See Appendix M for a copy of the notetaker protocol.

For each focus group, I arranged seating and provided name cards. Seating was arranged so that all participants were facing each other. Place cards for each participant sat in front of them to assist with note-taking and the flow of conversation during discussions. Free childcare and food provided incentives for participation. These elements will be discussed below.

Implementation. The purpose of focus groups is to promote participant self-disclosure (Krueger & Casey, 2009). Thus, a prerequisite is to build rapport. In each focus group, I opened the group with Krueger & Casey's (2009) recommended introduction format. First, I welcomed participants and introduced myself and the notetaker. Next, I read a script that entailed an overview of the topic, including reasons they were invited to participate. Afterwards, I provided ground rules for the focus group discussion. The ground rules were designed to encourage everyone to share their experiences and to respect each other's confidentiality after leaving the group. Participants were also reminded that the discussion would be audio recorded as indicated in the consent form. After ground rules were set, I started the group discussion with an opening question designed to induce everyone to share. Specifically, participants were

asked to share the last activity that they engaged in with their child who receives early intervention services. After all participants answered, I proceeded with the remainder of the interview protocol (see Appendix F). Once all data were collected, I gave participants a gift card and invited them to have their children join them for a meal. Total participation time, calculated as the time between signing consent and the end of the focus group discussion, was about two and one half to three hours.

Immediately after each focus group, the notetaker and I reviewed the field notes we had taken and summarized initial impressions (Patton, 2002). Patton (2002) indicated that it is critical to reflect immediately following interviews in order to identify emergent themes. In addition, he indicated that it is important to elaborate on field notes taken by writing down all that can be remembered. We completed each of these steps to collect field notes that informed the interpretation of findings from focus group transcripts.

Data Analysis

Next, I used descriptive analysis to analyze demographic forms and surveys and constant comparison analysis to analyze focus group data. Descriptive analysis involved entering survey and demographic form data into separate Excel spreadsheets and calculating measures of central tendency. Additionally, I calculated percentages and obtained measures of dispersion. Constant comparison analysis, also referred to as coding, was used to identify themes within and across focus group interviews (Miles et al., 2013). I coded the field notes using constant comparison analysis. Analyses are described in detail below.

Demographic Form Analysis

The demographic form filled two main purposes: (a) to gather descriptive information about participants and their families, and (b) to establish the level of homogeneity within and across focus groups. I entered data from the demographic forms into a Microsoft Excel spreadsheet. Means, medians, modes, percentages, and ranges of the data determine if differences exist among participants in each focus group or across focus groups. This information assists in the interpretation of results.

Survey Analysis

Microsoft Excel and International Business Machines Statistical Package for the Social Sciences (IBM SPSS) spreadsheets managed the survey data. Analysis proceeded as follows. First, frequency counts and percentages were calculated for each survey item. Bar graphs were created for each table to illustrate the distribution of ratings. Additionally, frequency tables were created to present the number and percentage of participant ratings for engagement and ecocultural influence variables. Then mean, median, and mode were calculated. These statistics were calculated for each participant and each survey item. The mode is the best means to analyze ordered categorical data (Miles, 2006). However, the mean, median, and mode were calculated for each item to provide a greater contextual understanding. Next, standard deviation and skewness for each variable were calculated and presented in a table to illustrate variability within and across variables. Line graphs were created to further facilitate the comparison of variables. Finally, the interquartile range rule for outliers ($Q1 - 1.5 \times IQR$ and $Q3 + 1.5 \times IQR$) was applied to assess for outliers (Velleman & Hoaglin, 1981). I determined that

calculation of the aforementioned statistics was appropriate because gathering descriptive statistics is a standard procedure for understanding data from quantitative measures (Creswell, 2013).

Focus Group Analysis

I analyzed focus group data collectively by means of cross-case constant comparison analysis (Creswell, 2013). Constant comparison analysis is suited for deductive analysis processes as well as focus groups, which were both be used in this study (Leech & Onwuegbuzie, 2007). Elo and Kyngäs (2008) note that deductive analytical processes are less common than inductive processes during qualitative analysis; however, deductive analytical processes are increasingly used because they are useful in testing and furthering existing theory. Regarding the appropriateness of constant comparison analysis for understanding focus group data, Leech & Onwuegbuzie (2007) argued that the technique was originally developed to analyze data across several rounds of interviews, each round with new groups of participants.

In qualitative analysis, data collection and data analysis occur concurrently. Thus, as each focus group interview completed, it was transcribed and steps 1–3 described below were used to gain preliminary understandings. Creswell (2013) describes constant comparison analysis as a six-step process. Step one is organizing and preparing the data. During this phase, I prepared transcripts by combining them and adding line numbers to easily locate data. Next, I developed two coding indices, also referred to as a list of codes or qualitative codebook (Creswell, 2013; Miles et al., 2013). The first coding index delineates ecocultural domains as primary codes and features within each domain as

secondary codes (see Appendix N). Secondary codes accompany definitions. The second coding index focuses on early learning opportunities (see Appendix O). Step two is reading through all of the interviews; I read each focus group interview to gain initial understandings of the data. Step three is coding, which is the process of clustering data in a way that allows the researcher to make meaning of the data (Creswell, 2013). During this phase, I rearranged interview data to align with the organization of the coding index. Then, I assigned initial codes to 20% of the interview data and commented in the margin of the interview beside significant data for which a code did not exist. An independent coder, who was the notetaker during the focus groups, followed the same procedures while coding the same 20% of the interview data. A description of the procedures used to determine inter-rater reliability between the two codings is provided later in this chapter. Step four involves using the codes to identify larger themes. Because deductive analysis was used in this study, themes were predetermined. No additional themes emerged. Therefore, during this phase, the coding index condensed to reflect the interview data and I used the resulting coding index to code 100% of the interview data. Step five involves determining how the themes would be used to inform the qualitative narrative. During this phase, early learning opportunities and engagement codes sorted into three categories: (a) barrier, (b) no influence, (c) facilitator. Additionally, quotes from participants that best illustrate thematic findings were identified and highlighted in the transcript. Step six is interpreting the data. During this phase I compared findings from the survey and focus groups and interpreted them against ecocultural theory. Specific areas of convergence and divergence will be discussed in Chapter V.

Field Note Analysis

Constant comparison analysis, as described above, was also used to analyze field notes. Notes from each focus group clarified findings from corresponding focus groups. Additionally, they identified participants, setting characteristics, and participant characteristics when appropriate.

As mentioned in the qualitative data analysis description, the final step of analysis is interpretation. Therefore, once quantitative and qualitative data analysis concluded, I compared and synthesized the findings (Creswell & Planko Clark, 2011). In Chapter V, specific areas of convergence and divergence will be discussed in relation to ecocultural theory.

Trustworthiness

Qualitative researchers have moved away using the terms validity and reliability in reference to the credibility of qualitative research. Instead, terms like trustworthiness (Guba, 1981) and goodness of fit (Denzin & Lincoln, 2011) are widely used. The former aims to establish credibility—that the research findings can be “trusted” after research is complete (Denzin, 2009; Morse, Barrett, Mayan, Olson, & Spiers, 2008). Goodness of fit is more concerned with establishing internal validity. Because I did not ascribe to a specific epistemological stance, I used a combination of strategies to establish validity and reliability. However, most strategies used were qualitative in nature because this approach was prioritized in the study.

Creswell (2013) recommended that researchers use multiple strategies to establish the validity of qualitative research. For this study, the top four strategies that

Creswell identified for ensuring validity in qualitative research were used. They are triangulation, member checking, the use of rich descriptions, and the identification of researcher biases. Triangulation can occur at various points during a research study. It involves using multiple data sources, methods, or theories (Onwuegbuzie & Leech, 2007; Tobin & Begley, 2004). Accordingly, as described in the measures and procedures sections above, multiple data sources and analyses informed this study's results. Member checking is a process by which participants verify findings, often through follow-up interviews or commenting on final results (Creswell, 2013). However, because focus groups have a built-in member checking quality, additional provisions for member checking were not made after data collection is complete (Creswell & Miller, 2000). Instead, during data collection, participants had the opportunity to clarify their statements and express disagreements. In addition, I provided summary statements throughout the discussion and checked with participants for accuracy (Krueger & Casey, 2009). Rich descriptions are characterized as having culturally situated meanings and concrete details (Tracy, 2010). To ensure that this study entailed rich descriptions, interviews were transcribed verbatim, a substantial amount of participant quotes are used, and settings and participants are thoroughly described. These efforts ensure that findings retain contextual integrity and provide readers with the opportunity to make their own interpretations of findings. The identification of researcher bias requires that researchers self-reflect and identify how their backgrounds might influence their interpretation of findings or other phases of the research process (Creswell, 2013; Tracy, 2010). A subjectivity statement, identifying potential researcher biases relevant to this study, is provided in Appendix P.

Qualitative researchers are less able than quantitative researchers to identify validity threats before the data collection process (Maxwell, 2008). However, in addition to the aforementioned strategies, I made considerable efforts to address issues raised during the piloting of this study (e.g., modifying protocols for readability) and to design a study that met quality standards. These efforts resulted in minimal validity threats. During the entire research process, I addressed expected and unexpected validity threats proactively. For example, when the initial targeted western counties failed to yield an adequate number of participants, I chose an alternative county with similar characteristics (based on the most recent statistics available at the time) as a replacement to promote homogeneity among all targeted counties' participants. Additionally, as noted earlier in the chapter, I modified the interview protocol to better capture the scope of parents' engagement alongside ecocultural domains.

Reliability is established by three means: the use of a coding index with definitions, the use of precise data collection and analysis processes, and obtaining inter-rater reliability. A definition for each code aided in setting parameters for coding. The precision in data collection ensured that fidelity was used and also afforded future researchers the ability to pursue replication studies. Finally, inter-rater reliability established consistency in findings between multiple coders. To obtain a reliability score, an independent coder codes 10 to 20 percent of data (Thompson, 2014). For this study, an independent coder, the notetaker for the focus groups, coded 20% of interviews. The independent coder initially coded 20% of interviews to facilitate cross-checking, a process whereby multiple coders identify inconsistencies in coding (Miles et al., 2013).

The independent coder used the existing coding index to code each comment in the interview that was described by the code. Additionally, she notated additional codes that arose during coding to ensure that the coding index was exhaustive. The independent coder used the existing coding index to code 20% of the transcripts. After the independent coder and I had each completed coding, I compared the codes to identify disagreements and to seek consensus. No additional agreed upon codes were identified. However, the cross-checking yielded refinements to the definitions for codes, and the interviews were recoded. After coding was complete, I calculated inter-rater reliability using the formula total agreements divided by total agreements plus total disagreements (Miles et al., 2013). This process repeated until no new codes emerged and we reached 93.75% agreement (Miles et al., 2013).

Summary

This chapter outlined the mixed methods approach that investigated ecocultural factors and sustained engagement. The rich data provided through focus group interviews and field notes and the statistics gained from demographic and survey data resulted in deeper understandings of the engagement experiences of parents and young children who live in rural communities. These understandings will be presented in the next chapter.

CHAPTER IV

RESULTS

The purpose of this study is to identify ecocultural influences that affect parents in rural communities and how they relate to the engagement patterns of parents who have young children with disabilities. The research question that guided this study is, “What ecocultural factors of families from rural communities affect parents’ sustained engagement in early learning opportunities?” Without a clear understanding of these influences in relation to sustained engagement, the provision of holistic services and supports for families who have children with disabilities is hindered. A concurrent transformative mixed methods approach is used to examine multiple facets of ecocultural influences and engagement in order to provide insights that might lead to positive child and family outcomes.

In the following sections, I report qualitative and quantitative results. First, I present focus group findings for each ecocultural domain (see Appendix A), alongside parents’ engagement patterns. Next, I report survey findings for within and across ecocultural domains. Additionally, I discuss results for engagement frequency, parent importance, and child importance variables. The chapter concludes with a summation of findings from focus group and survey data on sustained engagement.

Focus Group Results

Participants identified various ecocultural features in their counties (see Appendix A for a list of features). Through focus group discussions, I obtained insights into the influence of these features on sustained engagement. However, specific early learning opportunities within parents' homes were not mentioned as often in the focus groups. Below, I present focus group results related to each of the ecocultural domains.

Family Subsistence and Financial Base (Work)

Parents mostly indicated that employment-related ecocultural features were unfavorable, but that they did not influence their engagement with their children. The number and flexibility of hours parents worked was at the forefront of the discussion when parents were asked about work conditions. These features were reported as negative influences by all but one focus group participant. About 50% of the participants worked. All mothers who were married indicated that their husbands were employed. Many participants worked jobs inside the county where they resided, but some had to travel distances requiring 60 to 80 minutes of travel daily. The same was true for participants who worked outside of the county. Regarding number and flexibility of hours, one parent stated,

Well, for three days out of the week, I don't even hardly see my kids but an hour a day because I work third shift, so I sleep and work and sleep and work. So, I literally wake up at like 5 o'clock in the evening and I walk out the door at 6:15...but it's not like I don't get to do anything with them except for four days off.

A father noted,

Normally I go to work before they wake up, so I'm not there when he first wakes up. And then, by the time I get off, it's kind of close to the bedtime, but sometimes I let them stay up a little later, so I can get more time with them. And I try to be going- giving them their baths and put them to bed because I miss the time to be there a lot, because I'm at work.

Although the participants generally regarded work features as having no influence on their parental engagement, some of the participants reported that these features did, however, influence the kinds of activities they provided for or participated in with their children. For example, many who worked in the county where they resided indicated that the amount of income they were able to earn within the county was a barrier to engagement in learning opportunities outside of the home, e.g., dance classes, childcare, or Cub Scouts. One mother commented,

I think for pretty much everyone in the area, income is a major hindrance, I guess. I actually have four children, and I know my aunt has children roughly the same age, and they're all the time dancing, going to dance, and going to gym, and going to cheer. There's not as much availability of that kind of stuff in our area, and even the ones that are able to afford it, most of the time it's just one activity rather than three or four that the larger areas can usually provide to their children. Especially parents that have multiples, it's a big hindrance.

When the moderator asked if others had similar experiences, a stay-at-home mom added, “My husband is the only one bringing in the work, like the money, and he works as a mechanic. You don't get paid a whole lot for that. Even if they did provide it, we wouldn't be able to afford the entrance fee to even do anything.” The two participants who

reported having the highest yearly household incomes (in the \$50,000 to \$100,000 range) disagreed.

Overall, parents reported that work did not influence their engagement with their children. However, it did appear to limit recreational access outside of the home.

Accessibility of Health and Educational Services (Accessibility)

Many participants reported that limited access to health and educational services was a negative feature for them, whereas others regarded access as a positive feature. Neither group noted that access influenced their engagement with their children. Participants generally indicated that their children received routine care “nearby,” within a 20 to 30 minute drive. However, some parents indicated that they had to travel far distances to access specialty services and that travelling far away was generally a constraint. One of these parents noted, “All of our stuff’s at Duke [a hospital with children’s specialty clinics], and it’s a lot of travelling back and forth.” Other parents said that they received most of their services in a neighboring county. However, one parent noted that she had been recently referred to services that are farther away. She said, “Every specialist, [I’ve] got to go to Winston [Winston Salem, a city in a neighboring county], or more recently I’m getting referred from Brenner’s [a hospital in Winston Salem] down to Duke now, so that is a two-hour drive.” Another parent noted that she has to travel far for yearly appointments, which is not easy, and also for additional appointments if her son becomes ill. For example, she noted that her son recently got an ear infection and she was referred to Duke Hospital so that they could determine if the ear infection was related to any other conditions.

A few parents regarded access to health and educational services as a constraint because they had not been able to secure consistent early intervention services.

Following are statements from a mother who said her son had not received occupational therapy in about ten months. She explained,

I was supposed to have occupational therapy. We started it with one, she—something happened, she came one time, and it took three months...the agency kept calling every week saying, “She can't come again, she can't come again.” So then I got another one, three months later. Everything was going fine with her. We were starting to make progress in areas, and then she just stopped coming. I mean no phone calls, no nothing. I went through weeks and she never showed up, and I've been waiting on one ever since. They're just not available.

This mother continued,

At this point, I'm just giving up. He's going to be aging out [of the early intervention program] in a couple months, so I guess now I've got to hand it over to the school system, and hopefully we can get it there. I don't know, he's—our feeding is getting down next to nothing. That's been a huge struggle.

Another parent expressed similar difficulties with accessing early intervention services.

She said,

The [Children's Developmental Services Agency] CDSA has helped a lot with the physical therapist and the speech therapist. It took a while for us to actually get [a physical therapist], cause every time we got somebody, they would quit on us, like somebody said they got approved, and then they was like, “They're not going to come this far out.”

Despite some participants' difficulties in accessing early intervention services, most participants were receiving early intervention services and indicated that the receipt of these services in their homes was a resource.

Home and Neighborhood Safety and Convenience (Safety)

All participants regarded safety in their homes and neighborhoods as a positive feature and a resource to engagement. Many participants indicated that they lived far from highways and were able to allow their children to roam around in their yards, some with and some without adult supervision. For example, one parent said,

[We] live out there in, in nowhere land [laughs]. It's just us and another person right beside us and it's like a little bit off the road and I send them out. Well I don't send the little one out there, but if he goes out I'll go with him because we live so far of the road. And my little girl, she'll go out there and play all day long by herself.

One parent noted that his neighborhood wasn't the safest. He linked feelings of safety to supervising his children and also accommodations he had made to ensure safety. He commented, "Yeah, I don't think safety is a real big issue." Then he explained,

We live on the outskirts of [the county]—the neighborhood is not the greatest, is not the safest, so I have a fenced in yard with two big dogs in it to make it safe for my children. Nobody will come in my yard. I even have parents bring their children over to my yard because it's fenced in and then my dogs are nice to them, and they play.

So, although this family's neighborhood was not safe, the father indicated that he had made accommodations to ensure his children's safety.

Domestic Task and Chore Workload—Excluding Childcare (Home Tasks)

Participants concurred that they put aside a variety of housekeeping tasks to be able to engage with their children; therefore, these features did not influence their engagement. When parents were asked which activities they were or were not able to

engage in due to childcare tasks, one parent reported that due to the amount of tasks she has to complete at home, in conjunction with work hours, she is not able to spend as much time as she likes with her child. However, she made time for her child by taking less time for herself. This parent also reported having a lot of workload pressures. However, other parents reported that they put household tasks aside until their children are sleeping or simply do them whenever they have the opportunity. One parent responded to the question by saying, “Nothing. I do everything. Like, I put my chores off, like until it's time to go to bed...I put all the effort into the kids and then everyone goes to bed and it's just me time to do my stuff.” Accordingly, a parent commented, “The dishes can wait. The trash can wait. It can all wait. I don't care if I don't have my laundry. I don't care if I'm behind. I never get caught up on laundry.”

A few parents mentioned that they could not put tasks like cooking aside to engage with their children. However, these instances were exceptions and rendered difficult to assess in terms of influence on engagement. For example, a mother noted,

... But I do find myself putting the TV on so that he can watch TV while I do the laundry or while I cook the supper so he won't be in the middle of it, and keeping me from doing that chore. So I guess, in some ways it could be a hindrance in that I'm going to keep him busy doing something else...but I mean, for the most part, I'm going to put his needs and what he wants to do above those things. But I have to cook supper, I have to do the laundry, I do have to sweep up the mess he just made, or whatever.

Only a few parents made comments indicating that they prioritized certain chores over engagement. Most parents reported the opposite, and indicated home tasks had no influence on engagement.

Childcare Tasks

Most participants did not identify a relationship between childcare tasks and engagement. However, some indicated that informal support from relatives, including mothers-in-law, mothers, and grandmothers, was a positive feature. One mother explained that her mother-in-law helps her with her son. She said,

My little one, he takes a nap during the daytime. But [the child receiving early intervention] will not take a nap. He will not. Anytime I'm in there washing clothes, he's right there behind me. I'm cooking supper, he's right there behind me. I tell my mother-in-law, I say, "Take him, take him."...and he never went down to 2:00 this morning...you rarely you can get him to take a nap. He did yesterday, maybe an hour and a half. You really don't want him to take no nap. He took the nap, got him in the bed about 2:00 this morning. My mother-in-law stayed up with him.

Some others reported having similar support from relatives.

A subset of participants, those who had children with special care needs, reported mixed thoughts (some positive and some negative) about support from relatives. A few of these parents indicated that their parents could not handle their children's disabilities. One mom's experiences were somewhat more negative than the others. She noted,

My family, they tell me, "He's just a boy," so we don't even—they don't come see us. My grandma sees him cause she watches him every day, but as far as my dad, and my stepmom—and my stepmom is a special needs teacher—she says I'm going overboard, and that I'm over exaggerating and that he's fine. They don't come see us, so I feel—we feel alone.

Parents of children with special care needs did, however, agree that two features related to childcare tasks (types of care needed due to child's disability and the amount of care needed due to the child's disability) were a barrier to engagement for two reasons:

types of special care needed (for example, special feedings) due to their child's disability and the extent to which they have to engage in special care tasks. Special care needs included, but were not limited to, special diets and other considerations related to sensory integration and allergies, breathing treatments, wearing glasses, and wearing leg braces.

Regarding types of care their children needed, one mom said that her son was born delayed from the knee down. She explained,

People call it clumsy, but he falls constantly, and it's because of how his feet are now turning due to his leg bones. So we have that, we don't like to go outside because that's when he falls the most, and he'll hurt it to where he can't walk for days. So we avoid parks.

A mom whose son was diagnosed with congenital heart defect said,

He eats overnight, so he eats from eleven at night to nine the next morning, and then he gets three bolus feeds and then some milk and then bolus feeds of water, and that's during the daytime. So like if I have to go, get in the car and just go somewhere, it's—it's hard to have to like, stop every other hour to give him shots of milk and stuff, and um, that it—that's what takes a toll like if, unless somebody's with me, then, it's hard for me to do by myself.

She continued, “And it was even worse when he had to eat for twenty hours on the feeding pump because I couldn't go anywhere at all. But that's, that's mostly what keeps me home, is having to deal with him.”

Many of the participants who spoke about their children's special care needs as a barrier to engagement also indicated that the amount of time it took to engage in special care was a barrier because it took away time from their other children. For instance, a mom shared that her daughter had a goal to read 1000 books this year. She noted that

they were up to 800 books, but it is difficult to help her with such tasks in the evenings because she has to prepare two meals, one for her son and one for the rest of the family. Another mom concurred, noting that her daughter has become very independent because she has to spend so much time with her son. She concluded, “It's hard, because you don't want [siblings without disabilities] to grow up like that, but you have to focus on the one that needs you more.”

Although the majority of parents said that they had informal supports and childcare tasks had no influence on engagement, several parents indicated that their children had special care needs that did impact engagement.

Children's Play Groups (Playmates)

Participants did not provide direct insights on the influence of children's playmates on engagement. However, they indicated that most of their child's playmates were siblings. A few participants reported that their children also had exposure to playmates at childcare or at church. The majority of parents expressed that they were content with their children having mainly sibling playmates. However, many of the parents expressed a desire for or pursuit of additional playmates for their children for socialization purposes. One parent whose child has autism said that she wished more play groups were available to her son so that he could build social skills. She explained,

I know my son goes to school for his autism, but it would be like really nice if they had this thing like once a week where you could just take your kids there and let them interact and show them how to play sports, you know...I guess in a better way of putting it, have fun and learn at the same time, and have like a bigger group of children that way he has more to interact with, because in his class there's only like three other children... if he had another child that was autistic or had special needs—it would, it would probably make him feel more comfortable

make him feel better, “Hey, you're the same as me, let's go have fun,” and have more interaction like he needs, because he doesn't. I think he needs more interaction, something that's specifically for him, and other children like him around this area.

Another mom explained that her son has a seven-year-old brother with whom he engages. However, she and her husband decided to enroll him in childcare so that he could have interactions with children his age. Another mom was opposed to childcare, but did desire for her son to be involved with playmates who were his age. She shared,

It's been brought to me, with his social skills, that I should do a ‘momming’ something group. I'm not able to do that because it's during my work hours. I'm off on Fridays, but there's nothing going on around here on Fridays that I've been able to find for his age group. So, we're not able to help his social skills out much. He is not in day care, and I will not put him in a big day care.

Some of the participants had children in the home, in addition to their child who was receiving early intervention services, whom they regarded as playmates. However, few playmates were reported overall, especially playmates with similar characteristics.

Marital Role Relationships

Most participants who were married indicated that the quality of their marital relationship was a resource to engagement. One of the parents who regarded her relationship as a resource said, “My relationship with my spouse, it's not a hindrance at all. It's definitely a help. I can't imagine being a single mom, honestly! It is, it would be difficult.” Other married parents chimed in with agreement. Another participant remarked, “There's not really a barrier as far as the relationship with me and my husband. Most of the time, we're happy and cutting up, and laughing and carrying on, so it kind of

goes into the kids...they get involved.” Another parent regarded her relationship as a resource from a different perspective. She noted,

I'm not going to say we're negative with each other, it's more trying to find the common ground so that we give [our son] everything he needs, so it's like a tug of war to try to make sure we're on common ground. So generally we work out very well.

The parent who regarded her relationship as a barrier shared that she and her husband have been struggling in their relationship due to their child's disability. She stated,

We typically don't even go grocery shopping as a family anymore, just because my husband will have a temper, being a protective, not in any bad way, but he just don't want people talking, you know, the whispers that you get, he can't handle it.

She further commented,

We never have the opportunity for anybody to watch our children. We haven't had a date night in three years. So we're definitely impacted. We're nowhere near the divorce line by no means, but it's hard. We wish we would have that time, and we don't.

This mother, though, was in the minority. Therefore, overall, parents regarded their marital relationship as a positive influence on engagement.

Networks and Organizational Involvement (Formal and Informal Supports)

Overall, participants indicated that the lack of support through formal networks and organizations was a negative feature in their counties. They reported that informal networks were a positive feature; however, most expressed a desire for additional informal supports. Parents agreed that few formal networks existed in their communities.

One participant commented that formal networks and organizations in her county were “non-existent.” Another participant commented, “The only group I know of is for autism, but nothing for, nothing for anything else.” One participant mentioned a Head Start program in his county and another mentioned the CDSA. Otherwise, participants concluded that there were no formal networks and organizations to provide support for families of children with disabilities, or that there were potential supports of which they were not aware.

Participants identified church and family members as informal supports.

Although some participants noted that their church was an informal support, others indicated that they were not able to attend due to their schedules or their children’s needs. One parent who did attend church said, “Most of the events in the community are because of the church we go to and we have like a lot of the things that go on and it helps.” Most participants indicated that they often rely on family members for social engagement and childcare needs. However, regarding childcare needs, some participants did not believe that their relatives were equipped to care for their child who has a disability. Regarding social engagement, most parents reported that they visit family members, but some indicated that it was difficult to do so because family members did not live nearby. One participant who has family members and church as supports shared insights into the support she has for her two-year-old. She said,

I guess, like I said, I'm not really a, I kind of am a single parent, but it's a lot different...I have people who won't leave her alone. They're all time wanting to pass her, every time we get around to somebody, so we're more out, you know, I have family who won't leave her alone, and I can't even hold her in church, because people are passing her around.

Regarding informal supports, most parents reported the desire to have someone to talk to who could relate to having a child with a disability or delay. One participant noted,

I didn't have any issues with my seven-year-old and, you know, I have siblings and they have children, and they, they don't have the issues that I have. And some of their younger children are more advanced than my two-year-old. So this has been really interesting, because I guess I'm just naive to think that I'm the only one.

Another parent chimed in,

I think that's the problem. Everybody doesn't reach out, just doesn't, and you're just stuck in your own little bubble, and you feel lost, and you feel like no one else understands. Mine is basically just communication delays, but even then, it's hard when her grandfather goes, "I can't understand a word she's saying."

The overall influence of participants' involvement in networks and organizations on engagement was unclear. However, parents noticeably reported the desire for additional support resources.

Role of Father in Childcare (Father Involvement)

Participants reported mixed father involvement in childcare. Most families indicated that the degree and quality of husband participation were positive features. However, some mothers indicated that their husbands were not involved in childcare tasks, especially those related to the child with a disability. The latter group indicated that father involvement was a constraint. Parents who were not married did not discuss father involvement during interviews.

One participant who expressed father involvement as a facilitator in her family asserted,

[My husband] has actually brought [my son] a loooong way... my husband works with [my son] regularly, and I just, I just think there should be more fathers out there like that. I mean cause if it wasn't for him, I don't believe [my son] would have come as far as he has. I mean yeah, he's got the schoolings and stuff, but I think with children with special needs, like how you interact with your son, it's important to give them as much time as you can.

One of the three parents who regarded father involvement as a barrier indicated,

With my little one, [my husband] don't do the baby thing. So until he gets older, he's actually like mine, might as well say. I do all the doctors, I do all the medicines, I do all the feeds, I do everything!...I mean he's a good dad, he just don't help me. At all!

Families had mixed experiences regarding involvement from fathers with children who had disabilities. Overall, father involvement was regarded positively; however, some fathers' lack of involvement regarding their children with disabilities was a constraint.

Sources of Child Cultural Influence

Participants concurred that cultural activities were present in their counties, but suggested that they did not influence engagement. Many parents reported that they rarely attend cultural activities, mainly due to their child's disability or other developmental needs. Many parents said that they do not attend cultural activities because their children do not do well in crowds. For example, one mother said, "We don't go to anything because [my son] can't handle the crowds." Another mother shared, "I think it's a nice

idea [to attend events], but by the time you get there and deal with the crowds, you end up with just having meltdowns, and fussy kids, and it's just way too overwhelming in my experience.” One father noted that he does engage in events, but also has to take his son's needs into consideration. He explained, “If we see something that we think the kids would really enjoy, like firework displays ... we have to take into consideration how loud these events will be.” Consequently, he shared his son's experience while attending his sibling's basketball game. He said that his son did well, but did not like hearing the game board buzzer or the referees' whistles. Parents who did not report their children's characteristics as a reason for not engaging in cultural activities expressed a general disinterest in such activities.

Sources of Parental Information and Goals (Information/Knowledgebase)

Participants reported that limited sources of parental information posed a barrier to engagement. They specifically mentioned two sources of information that were available, pediatricians and early intervention programs. Despite the presence of pediatricians and early intervention programs, and believing they had a good knowledge base about their children's disabilities or delays, parents indicated that they wanted more information.

Most participants gave examples of ways in which the early intervention program and pediatricians had improved their knowledge. For example, one parent said,

I feel like [the early intervention program] has been really good ... I didn't even know if he needed physical therapy... I kind of kept putting it off just waiting to see if [my son] was going to stand or walk. But they were really working with us and telling me what he needed and what we needed to do. And, so I think he has been more successful because of them making me more knowledgeable.

Regarding her child's pediatrician, a mother said, "I feel blessed that we have the pediatricians that we have. That's how I got referred to the [early intervention] program that we're in...we have pediatricians that are reliable and [who] can point me in the right direction." One participant concluded that she did not know of places where she could gain information other than the pediatrician and early intervention program. She added that she was waiting on her son to start public school so that she could gain more information.

Like the aforementioned mother, other parents indicated that they would like additional information about their child's disability. When asked about sources of parental information and also about concluding thoughts at the end of the interview, participants indicated that they would like more formal and informal supports for the purpose of gaining information about their children's disabilities or delays. One parent commented that she wished parents in the community who have children with disabilities would come together, because "it is hard for the parents to actually speak with someone who's probably going through the same thing as they are." Comparable to this mother's sentiments, other parents felt that having additional networks would reduce feelings of isolation.

Community Heterogeneity (Community Characteristics)

Generally, participants indicated that the views and attitudes about disabilities in their communities had no influence on their engagement. Participants also indicated that the attitudes of people in their communities were mostly positive. For example, when

asked about views of people in the community, a parent of a child who has autism explained,

That's something that surprised me, because I figured—you know, him growing up being autistic, I've heard, you know, and seen stuff on TV about people's attitudes towards children with special needs. But I haven't seen none of that negativity. Everything I've seen has been positive, like if we tell somebody he's autistic, they don't look at him any differently, and they do everything that they know to do to help.

The parents who indicated they had experienced negative attitudes from people in the community concerning their children's disabilities were mostly parents who had children with speech or language delays. These parents concluded that people in their communities had limited views of disabilities. Many of them explained views of people in the community as this parent did, "Either your child is quote-unquote normal, or your child has something to the extent of severe autism or severe Down syndrome. That's the only disabilities that I think a lot of people can see. Not these mid-ranges of the sensory perception." One parent provided an example that illustrated both positive and negative attitudes within his community. He explained,

We was in that restaurant yesterday evening, and my boys, they cried, screaming, and [my son] he took the menu and shoved my drink. That was by accident. He didn't mean to do that. He was just scooting the menu; he hadn't pushed it. And I didn't do nothing about that, cause I knew it was an accident. People just looking...but then here comes the waitress, and she comes by and she walks up there, and she says, "Would it be alright if I bring him a cracker?" She brings him a cracker. He's quiet... [my son] couldn't tell you what he wanted. And those crackers, the crackers was gone. He went back to screamin'. She comes back by and she says, "It's going to be a few more minutes before you get your food, but would you mind I bring some more crackers?" And he quiet right back down and gets them.

This parent, as did other participants, concluded, “There's a few out there who understand, we just got lucky and we got one that did.” Regardless of attitudes in their communities, most parents engaged in a variety of activities with their children.

In summary, parents identified a number of positive and negative features within their counties. Positive ecological features were mostly regarded as facilitators to engagement, whereas negative features were generally viewed as having no influence on engagement. Regarding sustainability, parents reported various accommodations they had made to provide learning opportunities to their children. Culminating results on sustainability that include survey results will be provided at the end of this chapter. In the next section survey findings are presented to shed more insights on parents' engagement with their children and related experiences in their communities.

Survey Results

In this section, I present results from descriptive analyses conducted across each variable of the survey. The survey (Appendix E) used to collect data for this study had two parts. Part 1 of the survey measured how often parents engaged in a set of 30 early learning activities (engagement frequency), alongside their importance to the parent and child (parent importance and child importance). Part 2 of the survey measured the influence of 26 ecocultural features (ecocultural influence) on parental engagement. Specific ratings for each variable are described below. Results from Part 2 of the survey are reported first to highlight parent ratings on ecocultural influence, the central phenomenon in this study. Afterwards, findings from Part 1 are reported on (a)

engagement frequency, (b) parent importance, and (c) child importance. Finally, noteworthy findings for individual features and activities are discussed.

Ecocultural Influence (Survey Part 2)

Parents rated the majority of items on the ecocultural influence scale as either being a resource or having no influence (Figure 4.2). Few items were rated as constraints. Parents' ratings ranged from 1.96 to 4.15 on a 5-point Likert-type scale, where 1 = *Constraint to Parent-Child Engagement*, 2 = *Somewhat Constraint to Parent-Child Engagement*, 3 = *No Influence*, 4 = *Somewhat Resource to Parent-Child Engagement*, and 5 = *Resource to Parent-Child Engagement*. The overall mean, median, and mode for ecocultural influence were 3.41, 3, and 3, respectively.

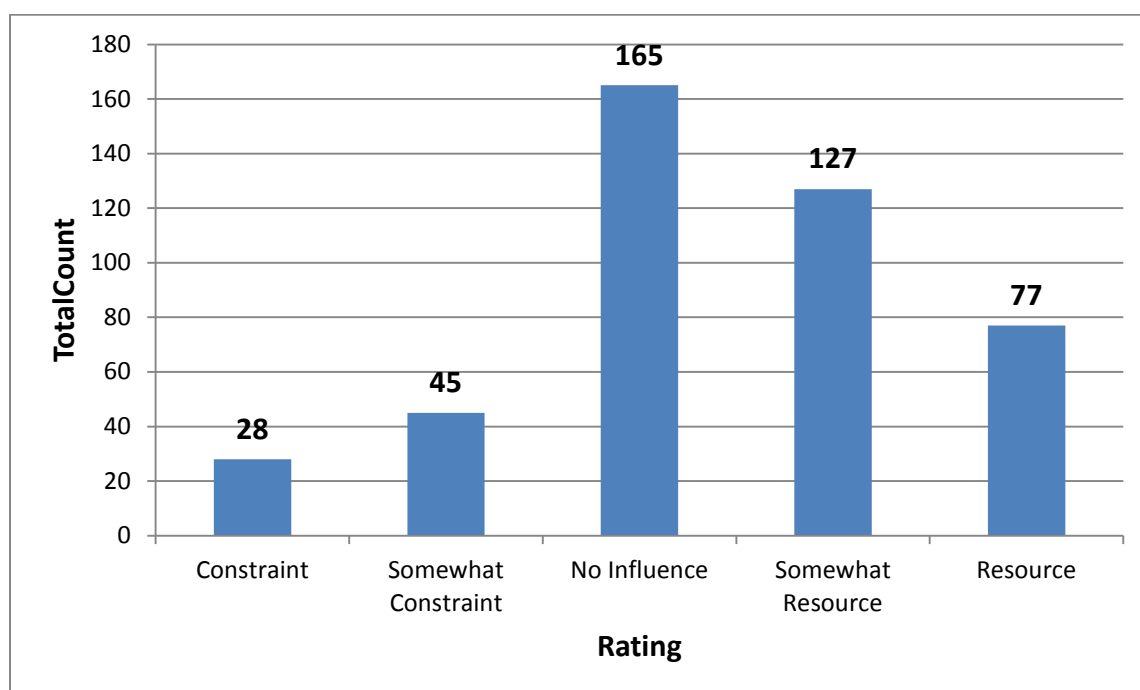


Figure 4.2. Participants' Ecocultural Ratings for Total Sample (N=17).

Ratings for ecocultural influence for the total sample were normally distributed, but had a somewhat negative skew (see Figure 4.1). There were a total of 442 ratings (17 participants each rating 26 items) provided for the ecocultural influence variable. The combined *resource* and *somewhat resource* ratings made up 46% ($n=204$) of ratings. Ratings of *no influence* accounted for 37% ($n=165$) of all ratings. The combined *constraint* and *somewhat constraint* ratings made up 16% ($n=73$) of ratings.

Frequency counts and percentages for each survey item in Part 2 are presented in Table 4.1. Each survey item is an ecocultural feature described within the ecocultural domain framework. Several individual ecocultural features, 38.46% ($n=10$), stood out as having a positive influence on parent engagement due to the percentage of parents who chose positive ratings. These features were those that most parents, 50% or more, rated as a *resource* or *somewhat a resource*. These features were: neighborhood safety (65%), living conditions (82%), completing household tasks (71%), help with childcare (59%), quality of parental roles (65%), informal supports (76%), quality marital relationship concerning child (71%), father involvement with child (71%), cultural activities (65%), and attitudes toward disabilities within the community (53%).

About 23.08% ($n=6$) of features were rated as having *no influence*. These were work hours (59%), work responsibilities (82%), distance to work and services (65%), family's feelings about household workload (65%), non-biological male involvement (65%), and special sources of information on disabilities (53%). The remaining 38.46% ($n=10$) of features received mixed ratings, meaning no category was rated by 50% or more parents. No features were rated as a *barrier to engagement*. In summary, parents

perceived many ecocultural features in their communities as *resources to engagement* and some as having *no influence*. Their perceptions on the influence of the remaining features varied.

Table 4.1

Ecocultural Influence Rating Frequencies and Percentages by Item for Total Sample

(*N*=17)

Item	Constraint		No Influence		Resource	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
1. hours worked/flexibility of hours	3	18%	10	59%	4	24%
2. employment responsibilities	0	0%	14	82%	3	18%
3. amount and consistency of income	6	35%	6	35%	5	29%
4. distance from home to employment and services	3	18%	11	65%	3	18%
5. cost of transportation available	6	35%	7	41%	4	24%
6. flexibility of services (hours, location)	2	12%	8	47%	7	41%
7. safe neighborhood play areas	2	12%	4	24%	11	65%
8. house/living conditions	1	6%	2	12%	14	82%
9. completing household chores and tasks	3	18%	2	12%	12	71%
10. parents' and children's thoughts and feelings about workload	2	12%	11	65%	4	24%
11. assistance with chores/tasks (family size/composition, non-kin)	5	29%	4	24%	8	47%
12. people for childcare (grandparents, friends, neighbors)	6	35%	1	6%	10	59%
13. amount of care/supervision required for children	4	24%	5	29%	8	47%
14. additional childcare or programs due to child's special needs	3	18%	8	47%	6	35%
15. age, sex, kinship of playmates for child with special needs	4	24%	6	35%	7	41%
16. quality of parents' roles (bond, shared decisions/responsibility)	2	12%	4	24%	11	65%

Table 4.1

(Cont.)

Item	Constraint		No Influence		Resource	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
17. formal support groups (church, organizations, parent groups)	4	24%	8	47%	5	29%
18. informal support (neighbors, kin, friends)	2	12%	2	12%	13	76%
19. quality of relationship with male spouse regarding child	1	6%	4	24%	12	71%
20. nonbiological male involved, roles of alternate male caretakers	2	12%	11	65%	4	24%
21. father involvement with developmentally delayed child	2	12%	3	18%	12	71%
22. overall TV viewing, games, sports, family cultural activities	1	6%	5	29%	11	65%
23. books, lectures, trainings, classes, formal parent groups	2	12%	7	41%	8	47%
24. job, interest, personal contacts to give information on disabilities	2	12%	9	53%	6	35%
25. Social/cultural views, behaviors, attitudes toward disabilities	3	18%	5	29%	9	53%
26. Diversity in local community (mix of age, race, ability, etc.)	2	12%	8	47%	7	41%

Engagement Frequency (Survey Part 1)

Parents indicated that they had a high frequency of engagement across all items on the engagement frequency scale (see Figure 4.3). Parents' ratings ranged from 3.50 to 5.20 on a 6-point Likert-type scale, where 1 = *Never*, 2 = *At least each year*, 3 = *At least once each month*, 4 = *At least once each week*, 5 = *At least once each day*, 6 = *Multiple times each day*.

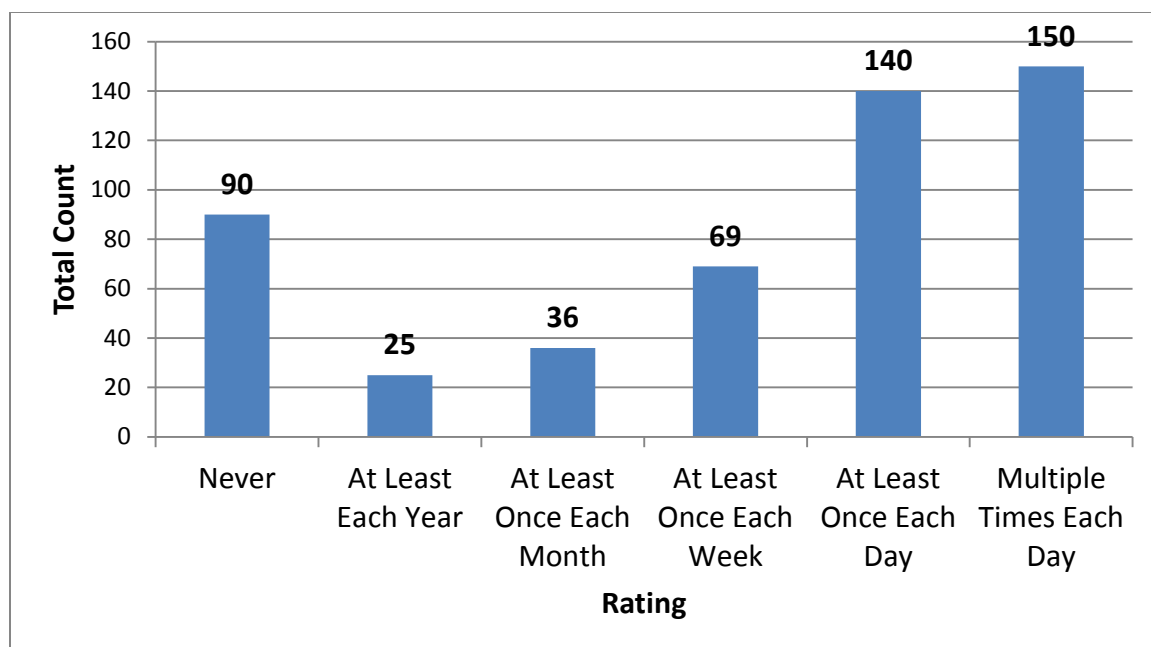


Figure 4.3. Participants' Engagement Frequency Ratings ($N=17$).

The overall mean, median, and mode for engagement frequency were 4.16, 5, and 6, respectively. Parents' ratings were normally distributed, but had a slightly positive skew (see Figure 4.2).

There were a total of 510 ratings (17 participants each rating 30 items) provided for the engagement variable. Overall, 70% ($n=359$) of parent ratings were *once per week* or more often, indicating that parents frequently engaged in various activities. A rating of *once per month* or less frequently accounted for 30% ($n=151$) of ratings.

Frequency counts and percentages for each engagement survey item are presented in Table 4.2. Items were assessed in terms of low, medium, and high engagement. Thus, ratings were grouped as follows (a) *never* and *at least each year* were categorized as low engagement, (b) *at least once each month* and *at least once each week* were categorized

as medium engagement, and (c) *at least once each day and multiple times each day* were categorized as high engagement.

Table 4.2

Engagement Rating Frequencies and Percentages by Item (N=17)

Item	Low		Medium		High	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
1. household chores	0	0%	1	6%	16	94%
2. cooking/preparing	3	18%	3	18%	11	65%
3. caring for pets	8	47%	0	0%	9	53%
4. child's bath time	1	6%	2	12%	14	82%
5. child's bedtime/naptime	0	0%	1	6%	16	94%
6. child's wake-up time	0	0%	0	0%	17	100%
7. brushing teeth	0	0%	2	12%	15	88%
8. washing hands/face	0	0%	0	0%	17	100%
9. cleaning up (child's) room	0	0%	3	18%	14	82%
10. reading/looking at books	0	0%	1	6%	16	94%
11. telling child stories	0	0%	9	53%	8	47%
12. adult-child playtime	0	0%	0	0%	17	100%
13. riding bike/wagon	5	29%	8	47%	4	24%
14. playing ball games	1	6%	9	53%	7	41%
15. water play/swimming	9	53%	2	12%	6	35%
16. art activities/drawing	2	12%	6	35%	9	53%
17. playing board games	10	59%	6	35%	1	6%
18. playing video games	11	65%	2	12%	4	24%
19. dancing/singing	1	6%	1	6%	15	88%
20. listening to music	1	6%	1	6%	15	88%
21. watching TV/videos	0	0%	2	12%	15	88%
22. family talks	0	0%	2	12%	15	88%
23. saying grace at meals	5	29%	1	6%	11	65%

Table 4.2

(Cont.)

Item	Low		Medium		High	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
24.religious/spiritual readings	5	29%	8	47%	4	24%
25.family gatherings	3	18%	11	65%	3	18%
26.picnics	10	59%	5	29%	2	12%
27.having friends over to play	3	18%	9	53%	5	29%
28.doing yard work	7	41%	8	47%	2	12%
29.planting trees/flowers	17	100%	0	0%	0	0%
30.growing vegetable garden	13	76%	2	12%	2	12%

As indicated in Chapter III, the early learning activities referred to in this study can be clustered into ten groups (see Appendix B). Fifty-three percent ($n=9$) or more parents reported high engagement in 17 survey items. These items included all survey items pertaining to family routines, parenting routines, child routines, and entertainment activities. At least 53% percent of parents reported medium engagement in four survey items. Two of these items were socialization activities. Finally, 53% or more parents reported low engagement in six items. Two items were grouped under play activities and two were gardening activities. Parents provided mixed ratings on only three engagement items: riding a bike or wagon, religious or spiritual readings, and doing yard work. Thus, overall, there was a high consensus among parents concerning the frequency of their engagement with their children across survey items.

Parent Importance and Child Importance (Survey Part 1)

Parents indicated that most engagement items were important always or were important most of the time. Ratings for parent importance ranged from 3.70 to 5.83 on a 6-point Likert-type scale, where 1 = *Never Important*, 2 = *Rarely Important*, 3 = *Sometimes Important*, 4 = *Often Important*, 5 = *Most of the Time Important*, and 6 = *Always Important*. The overall mean, median, and mode for parent importance were 4.58, 5, and 6, respectively. Parents' ratings for parent importance were normally distributed.

There were a total of 510 ratings (17 participants each rating 30 items) provided for the parent importance variable. Overall, 76% ($n=390$) of parents' ratings were *always important*, *most of the time important*, or *often important*. Twenty-four percent ($n=120$) of ratings were *sometimes*, *rarely*, or *never important*.

Parents rated the important of engagement items to their children using the same scale presented above. Their overall ratings across activities for importance to their children ranged from 2.53 to 5.67. The overall mean, median, and mode for parent importance were 3.93, 4, and 6, respectively. Fifty-nine percent ($n=299$) of the child importance ratings were *always important*, *most of the time important*, or *often important*. Forty-one percent ($n=211$) of ratings were *sometimes*, *rarely*, or *never important*. The child importance ratings were normally distributed.

Parent and child importance variables are presented alongside each other in Figure 4.4 to facilitate a comparison of data distributions between the variables. Although parents mainly rated activities as being *always important* for them and their

children, they also indicated that many activities were *never important* to their children. This difference resulted in a greater variance in child importance ratings than parent importance ratings. However, further analysis revealed several similarities between child and parent importance ratings. These similarities will be presented in the following findings from their analysis of importance variables for individual survey items.

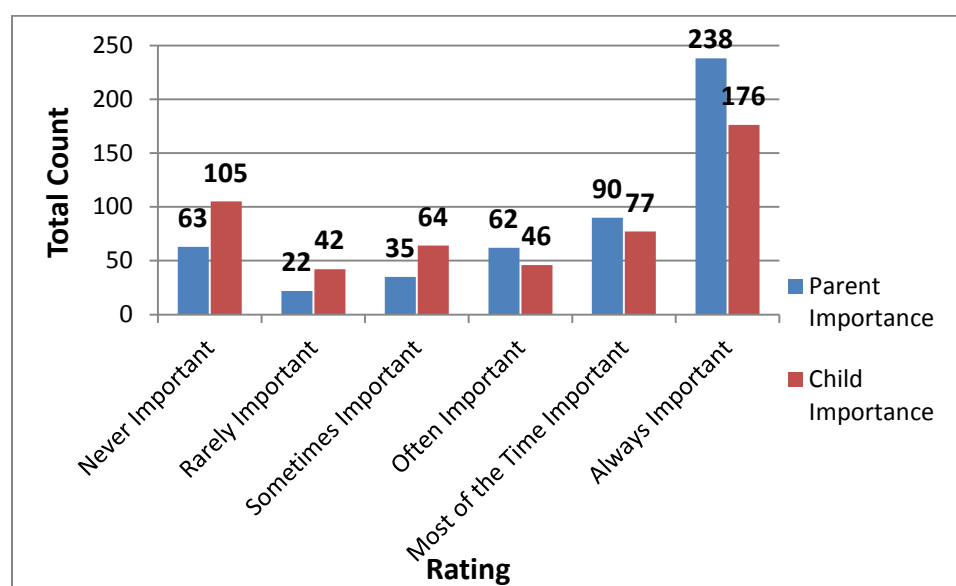


Figure 4.4. Participants' Parent Importance and Child Importance Ratings (N=17).

Frequency counts and percentages were calculated for parent and child importance variables (see Table 4.3). *Always important* and *most of the time important*, *often important* and *sometimes important*, and *rarely important* and *never important* ratings were grouped to assess high, medium, and low importance, respectively. Fifty-three percent or more parents indicated that 22 engagement items were of high importance to them. These items included all family routines, parenting routines, literacy activities, child routines, and family rituals (see Appendix B). Additionally, most

activities pertaining to entertainment and physical play were rated as having high importance.

Gardening activities and play activities were rated as having low importance to 53% or more parents. Fifty-three percent or more parents indicated that 16 items were highly important to their children. These included all parenting routines and entertainment activities. Also, most items related to child routines, physical play, and literacy. Fifty-nine percent ($n=10$) or more parents rated most play activities as having low importance to their children.

Most parents, at least 71% ($n=12$), reported that all parenting routines were highly important to them and their children. At least 53% reported that most child routines, literacy, physical play, and entertainment activities were highly important to them and their children. Most parents, 53% or more, indicated that play and gardening activities had low importance to them and their children. So although, overall, child importance ratings were lower than parent importance ratings, they were still generally high and a positive trend in ratings for both variables existed for various activities.

Gardening activities and play activities were rated as having low importance to 53% or more parents. Fifty-three percent or more parents indicated that 16 items were highly important to their children. These included all parenting routines and entertainment activities. Also, most items related to child routines, physical play, and literacy. Fifty-nine percent ($n=10$) or more parents rated most play activities as having low importance to their children.

Table 4.3

Parent and Child Importance Rating Frequencies and Percentages by Item (N=17)

Item	Parent Importance						Child Importance					
	Low		Medium		High		Low		Medium		High	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
1. household chores	0	0%	5	29%	12	71%	5	29%	7	41%	5	29%
2. cooking/preparing	1	6%	4	24%	12	71%	5	29%	6	35%	6	35%
3. caring for pets	7	41%	1	6%	9	53%	10	59%	5	29%	2	12%
4. child's bath time	0	0%	1	6%	16	94%	0	0%	4	24%	13	76%
5. child's bedtime/naptime	0	0%	0	0%	17	100%	2	12%	3	18%	12	71%
6. child's wake-up time	0	0%	0	0%	17	100%	0	0%	5	29%	12	71%
7. brushing teeth	0	0%	1	6%	16	94%	3	18%	2	12%	12	71%
8. washing hands/face	0	0%	1	6%	16	94%	4	24%	4	24%	9	53%
9. cleaning up child's room	0	0%	4	24%	13	76%	6	35%	4	24%	7	41%
10. reading/looking at books	0	0%	3	18%	14	82%	4	24%	5	29%	8	47%
11. telling child stories	0	0%	5	29%	12	71%	3	18%	5	29%	9	53%
12. adult-child playtime	0	0%	0	0%	17	100%	0	0%	1	6%	16	94%
13. riding bike/wagon	5	29%	5	29%	7	41%	6	35%	5	29%	6	35%
14. playing ball games	2	12%	6	35%	9	53%	3	18%	3	18%	11	65%
15. water play/swimming	2	12%	6	35%	9	53%	4	24%	2	12%	11	65%
16. art activities/drawing	2	12%	5	29%	10	59%	4	24%	3	18%	10	59%

Table 4.3

(Cont.)

Item	Parent Importance						Child Importance					
	Low		Medium		High		Low		Medium		High	
17. playing board games	10	59%	4	24%	3	18%	11	65%	3	18%	3	18%
18. playing video games	13	76%	2	12%	2	12%	12	71%	3	18%	2	12%
19. dancing/singing	1	6%	3	18%	13	76%	1	6%	3	18%	13	76%
20. listening to music	1	6%	4	24%	12	71%	1	6%	3	18%	13	76%
21. watching TV/videos	1	6%	8	47%	8	47%	2	12%	5	29%	10	59%
22. family talks	0	0%	2	12%	15	88%	3	18%	7	41%	7	41%
23. saying grace at meals	4	24%	0	0%	13	76%	5	29%	3	18%	9	53%
24. religious/spiritual readings	4	24%	3	18%	10	59%	6	35%	5	29%	6	35%
25. family gatherings	0	0%	3	18%	14	82%	2	12%	3	18%	12	71%
26. picnics	5	29%	7	41%	5	29%	9	53%	3	18%	5	29%
27. having friends over to play	1	6%	6	35%	10	59%	3	18%	4	24%	10	59%
28. doing yard work	5	29%	4	24%	8	47%	8	47%	3	18%	6	35%
29. planting trees/flowers	12	71%	0	0%	5	29%	13	76%	0	0%	4	24%
30. growing vegetable garden	9	53%	4	24%	4	24%	12	71%	1	6%	4	24%

Most parents, at least 71% ($n=12$), reported that all parenting routines were highly important to them and their children. At least 53% reported that most child routines, literacy, physical play, and entertainment activities were highly important to them and their children. Most parents, 53% or more, indicated that play and gardening activities had low importance to them and their children. So although, overall, child importance ratings were lower than parent importance ratings, they were still generally high and a positive trend in ratings for both variables existed for various activities.

Overall Results (Survey Parts 1 and 2)

To facilitate further understanding of relationships among variables, I assessed variability by calculating standard deviation and skewness, and also by using the interquartile range rule for outliers (Velleman & Hoaglin, 1981). Figure 4.5 depicts each parent's composite mean for each of the four survey variables. Note that the position of ecological influence did not allow for direct comparison to the other variables in terms of high/low position, because it was rated on a 5-point scale rather than a 6-point scale. However, its variability in relation to the other variables was assessed. Trends within and across variables are discussed below.

Comparatively, parent ratings for child importance deviated from the mean more than the other variables. In comparing trends across all variables, it appears that engagement and parent importance are most closely linked, due to their similar trend patterns. There is no clear association between ecocultural influence, parent importance, or child influence and engagement. However, there appears to be a small positive

relationship among ecocultural influence, parent importance, and engagement variables, meaning that ratings for each generally rise and fall simultaneously.

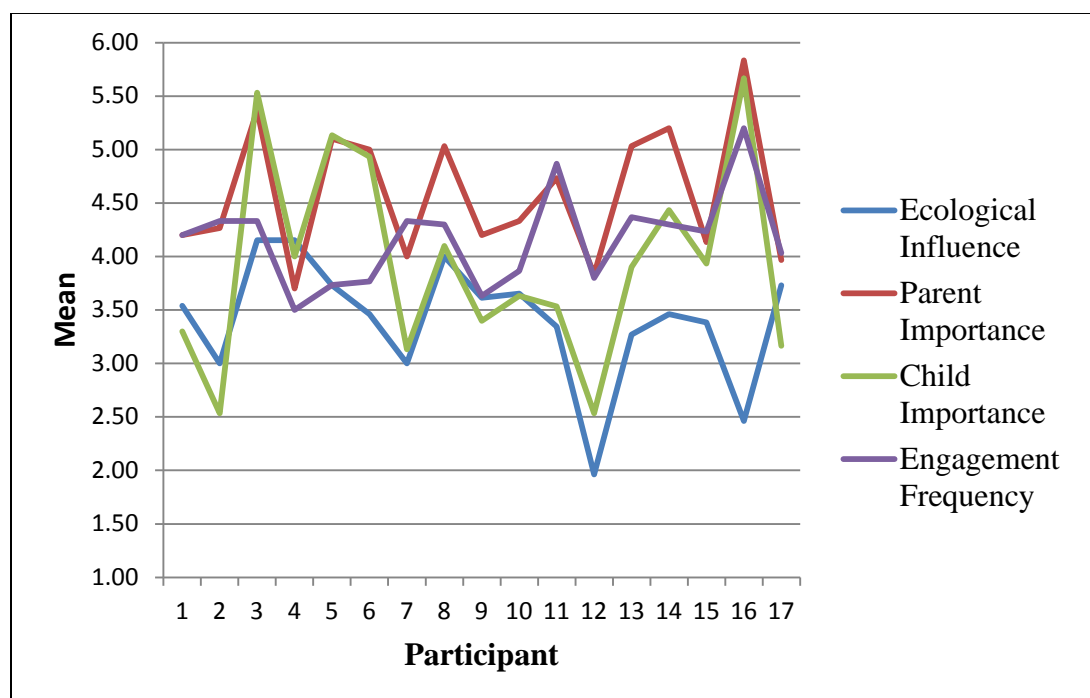


Figure 4.5. Individual Participant Means by Variable ($N=17$).

The association between variables is clearer when outliers (data from participant 12 and 16) are discriminated. The standard deviations of parents' composite means for engagement and ecocultural influence were low (see Table 4.4). However, the interquartile range rule for outliers (Velleman & Hoaglin, 1981) revealed that outliers existed in data provided for each variable. Participants 12 and 16 had composite means of 1.96 and 2.46, respectively, for the ecocultural variable. These means were below the lower limit cutoff (2.58). Parent 16 had a composite mean of 5.20 for the engagement variable, which was above the upper limit cutoff (5.13). Outliers accounted for the

somewhat positive skew in the engagement distribution and the somewhat negative skew in the ecocultural distribution. Standard deviation and skew can be visually assessed using Figure 4.5.

Table 4.4

Central Tendency and Variability Statistics across Participants for Each Variable

(N=17)

Variable	Minimum	Maximum	Mean	Standard Deviation	Skewness
ecocultural influence	1.96	4.15	3.4065	.56661	-1.124
engagement frequency	3.50	5.20	4.1641	.43632	.705
parent importance	3.70	5.83	4.5835	.61950	.372
child importance	2.53	5.67	3.9318	.94795	.434

Sustained Engagement

Several sustainability features were evident in focus group and survey data. As mentioned in earlier chapters, sustainability is measured across four dimensions: (a) social-ecological fit, (b) meaning to family, (c) congruence among family members, and (d) predictability as a result of the other dimensions. The focus group data mainly reflected examples of social-ecological fit. However, other dimensions of sustainability were embedded in interview discussions. Focus group data provided in-depth information about each dimension of sustainability.

Generally, parents reported that they regularly engaged with their children. However, parents did not mention many early learning opportunities during the interview discussions. Activities mentioned were mainly adult-child play and routines such as their

child's bath time, bedtime, and wake-up times. Because early learning opportunities are the unit of analysis for measuring sustainability across sustainability dimensions (social-ecological fit, importance, congruence, and predictability), focus group findings alone mainly provide an understanding of social-ecological fit. Focus group data indicated that parents perceived social-ecological fit, because just a few within case indications of constraints were expressed by parents and overall parents perceived that ecocultural domains had positive influences or no influence on engagement.

An indication that parents were sustaining early learning opportunities is parents' identification of accommodations, which are predictive of sustainability that they made in order to provide early learning opportunities for their children (Bernheimer & Weisner, 2007). In the section on safety, the father's account on making his yard safe was described earlier. The father had indicated that his neighborhood was not the safest, so he had fenced his yard and placed two dogs in the fence to provide his child the opportunity to play outside. This father's comments reflected him making an accommodation in the safety domain to sustain an early learning opportunity, namely, physical play. In the section on child playgroups, a mother's decision to place her son in childcare rather than have her mother continue to watch him as described earlier presented an example of an accommodation to increase socialization opportunities. Accommodations made in one domain to counteract features in another domain were also discussed by parents. For example, the father mentioned above also shared how he made an accommodation in the father involvement domain to increase his participation in early

learning opportunities (bath time and bedtime), because his work hours did not permit him to spend time with his children during the day.

Overall, the survey provides several indications of sustainability. First, regarding social-ecological fit, participants reported that 38.46% ($n=10$) of the ecocultural features facilitated engagement and 23.08% ($n=6$) had no influence. There were mixed finding for the influence of remaining 38.46% ($n=10$) of features, but none were deemed a barrier to engagement. Seventy-three percent ($n=22$) of engagement items were highly important to parents and 53% ($n=16$) were highly important to their children. Regarding congruence, parent importance and child importance ratings aligned for 63.33% ($n=19$) of engagement items. Thus, there was some congruence between parent and child perspectives regarding the importance of early learning activities. Finally, regarding predictability, there was a high overall frequency of engagement across early learning opportunities. Parents reported having high, at least daily, engagement in 56.67% ($n=17$) of engagement items.

Summary

Across focus group and survey data, several features emerged as positive features and facilitators to engagement in rural communities. Although some features were found to have no influence on engagement, none were found to pose a barrier to engagement. Additionally, survey and focus group data suggest that parents are sustaining early learning opportunities for their children. In the next chapter, a summary of the study will be provided, followed by an interpretation of findings from focus group and survey data. Afterwards, limitations and implications of the findings will be discussed. Next,

recommendations for future research will be provided. The chapter will conclude with a final summary.

CHAPTER V

DISCUSSION

The purpose of this study is to improve understanding of the contexts in which infants and toddlers from rural communities who have disabilities develop. A thorough examination of the perceptions of parents from rural communities who have children with disabilities or delays revealed insights into the relationships between ecocultural features and engagement for these families. There is limited research in the field of early childhood special education that contributes to a holistic understanding of how learning experiences of children with disabilities in rural communities are shaped. Existing research (Anthony et al., 2005; Barnett et al., 2010; Schlee et al., 2009; Wanless et al., 2011) is predominantly used to examine child outcomes in relation to individual parent or child characteristics, or in relation to one feature within broader systems (e.g., childcare setting, parental income). Therefore, this study is designed to explore the relationship between two sets of whole family characteristics: ecocultural features alongside parents' engagement patterns. Ecocultural theory strongly influences each component of this study (Weisner, 1984). It proposes that families will make accommodations in one of 12 ecocultural domains to sustain early learning opportunities that are meaningful.

This chapter includes a brief summary of the prior chapters. Next, conclusions and a discussion of findings are presented within the context of relevant research.

Limitations of the study and implications for practice are discussed next followed by recommendations for future research. The chapter concludes with a final summary.

The guiding research question for this study is: What ecocultural factors of families from rural communities impact parents' sustained engagement in early learning opportunities? Seventeen families from four rural counties who have infants and toddlers with disabilities provided insights for this inquiry through the completion of a survey and participation in one of three focus groups. Collected data were organized by the 12 ecocultural domains. Findings were consistent across focus group and survey data regarding seven ecocultural domains. Specifically, parents indicated that features in three domains facilitated engagement. These were (a) safety, (b) quality of marital relationship, and (c) childcare tasks. Parents indicated that features in three domains had no influence on engagement. These were (a) work, (b) access to services, and (c) home tasks. Parents reported mixed perceptions on the influence of features in two domains. These were (a) childcare tasks and (b) supports. Finally, there was strong evidence that parents were sustaining engagement in early learning opportunities. In the section that follows, each of these findings will be discussed in relation to ecocultural theory and related findings from literature in the field. Additionally, insights gained about the remaining domains will be shared.

Discussion

Parents indicated that several ecocultural features in their communities facilitated engagement. Additionally, they reported that some ecocultural features had no influence on their engagement with their children. The seven domains that were mentioned above

will be explored in depth in the beginning of this section. Afterwards, insights gained about remaining domains will be shared. Finally, sustainability will be discussed.

Ecocultural Facilitators to Engagement

Whether a parent deems an ecocultural feature a constraint or resource depends on how they use the feature within their socially constructed econiche (Gallimore et al., 1989). Parents in this study identified features in safety, childcare tasks, and quality of marital relationship domains as resources and also indicated that they facilitate engagement.

In relationship to safety, overall parents reported that they had safe neighborhoods and safe living conditions. Research indicates that about 82% of families from rural communities regarded their neighborhoods as safe (Grace et al., 2011). In this study, 88% said that their neighborhoods were safe. Only two parents raised any concerns about safety. One was the father mentioned in Chapter IV who fenced his yard and used his dogs to ensure safety. The other parent was a mother who regarded where she lived as “the hood,” also known as the ghetto. Interestingly, the two people who reported safety issues in their communities identified their races as Black and two or more races, respectively. That said, it is worth noting that Blacks involved in the research cited above were significantly less likely than Whites to perceive that their neighborhoods were safe. Therefore, it seems that early childhood special education professionals should consider safety within the communities of culturally and linguistically diverse families in relation to sustainable early learning opportunities.

The childcare tasks that parents identified as having a positive influence on engagement were people available and/or used for childcare. Some parents, and especially some stay-at-home moms, reported having family members who assisted them with childcare tasks. The use of relatives for childcare in rural communities is common (Swenson, 2008). Family members who provided assistance to the families in this study included the participants' older children, mothers-in-law, grandmothers, and siblings. Additionally, 79% ($n=11$) of the focus group participants were married. This is relevant because research indicates that fathers contribute to various childcare tasks (Simmerman, Blacher, & Baker, 2001). Over 75% of families from rural communities are comprised of married couples (USDA, 2004).

The third feature that parents reported as a resource to engagement was the quality of their marital relationship. As indicated above, the majority of parents who participated in this study were married. Most of them regarded marital relationships as a resource to engagement. Research on the associations between various stressors and marital adjustment in young children with disabilities revealed that most families have average to above average marital adjustment (Stoneman & Gavidia-Payne, 2006). However, when daily stressors and hassles were higher, husbands and wives viewed their marriages more negatively. Only one parent regarded her marital relationship as a barrier to engagement. This parent is one of the parents who also indicated that childcare tasks were a constraint to engagement. This mother perceived constraints in both domains that were linked to hassle. She noted that her family does not go out together because in past attempts, people have responded negatively to her son's behaviors and her husband has a

hard time dealing with their reactions. She also indicated that her son wants her to do more for him than her. Reasons this parent perceived more barriers than other families is beyond the scope of this study. However, it is important to mention that she was able to maintain early learning opportunities for her son.

Ecocultural Features with No Influence on Engagement

Parents deemed that features in work, accessibility to services, and home tasks domains had no influence on engagement with their children. This result might seem counterintuitive. However, work, accessibility to services, and childcare tasks are positioned toward the top of the ecocultural domain hierarchy. Therefore, families prioritize maintaining meaningful features in these domains, because a higher position on the hierarchy is related to a greater impact. Interestingly, these domains are also related to subsistence, mortality, and moral-cultural conduct, respectively (Bernheimer et al., 1990). Ecocultural theory indicates that subsistence, mortality, and moral-cultural conduct are aspects that highly influence the way families construct early learning opportunities. The fact that parents indicated features related to these aspects have no influence on their engagement suggests that parents prioritize making accommodations in one of the 12 domains to ensure that barriers related to these domains are minimal. For instance, several parents in this study prioritized travelling far distances to ensure that their children received the health care they needed. Community characteristics are at the bottom of the hierarchy. It is plausible that due to the limited potential impact of this domain parents reported that it had not influence on engagement.

Results regarding work are especially insightful, because poverty in rural communities is often considered a barrier (Lichter & Johnson, 2007). Although it may be a barrier in some instances, parents in this study indicated that it was not a barrier to engagement. This finding closely aligns with findings that neighborhood disadvantage (defined as an aggregate of per capita income, percent below poverty, proportion of households that are female-headed, proportion receiving public assistance, and proportion unemployed) in rural communities does not predict children's language development (De Marco & Vernon-Feagans, 2013). In other words, learning opportunities exist regardless of income and other work related factors. Ecocultural theorists indicate that, although income matters for sustainability, a "high" income is not necessary for sustainability (Weisner et al., 2005). Families who have limited income can provide sustainable routines for their children.

As indicated in Chapter IV, about one half of the participants worked and one half did not. The reason that most parents did not work is unknown. However, one parent indicated that it did not make sense for her to work because the amount she would earn would barely cover childcare. Some might perceive this mother's decision not to work as a barrier. However, consider the consequences of this mother gaining employment. Some might reason that placing her child in childcare would be the best option. However, they may not consider that the family would have to reconstruct their ecocultural niche by making changes across various domains. For instance, the mother might be less able to engage in early intervention services for her child, her engagement in household tasks would change, and so on. In other words, a change in the work

domain might cause barriers in other domains that impact engagement. Regardless of the overall low-wage earnings of parents in this study, they demonstrated that they were able to adapt in order to maintain engagement with their children.

Parents also indicated that the accessibility domain had no influence on their engagement. Research indicates that there is often limited access to services in rural areas (Haring & Lovett, 2001). Parents reported that they sometimes travelled far distances to access services for their children. One mother shared how she had recently gone back to work due to personal reasons. She expressed concern that she might no longer be able to engage in early intervention services due to her work schedule. It is unclear whether access will become an issue. However, the mother indicated she had already begun to adapt her daily routines to her work hours to ensure that she had time to engage in developmental activities related to her son's disability. She explained that she dedicates her mornings and afternoons, until she leaves for work, to working with her son on developmental tasks related to walking and eating. This mother was one of the two mothers who indicated that she had trouble maintaining an early intervention service provider. This mother had obtained a service provider at the time the data were collected. The other mother, however, had not. As a result, she reported that she often relies on information from the internet to guide her interactions with her son. Most families reported that they were receiving multiple early intervention services for their children. However, the fact two families were not receiving these types of services is not surprising, because the interaction between poverty and location is linked to fewer early intervention services in rural areas (Hallam et al., 2009). Only two families indicated that

their children were enrolled in childcare (this number includes a child whose parent ran a home childcare). However, many parents reported that they had chosen to keep their children home or for care to be provided by a family member. This aligns with research indicating that most families who live in rural areas use informal childcare (De Marco et al., 2009).

Participants stated that the family members' thoughts and feelings about tasks within the home had no influence on engagement. Parents reported having a lot of tasks to complete within the home. However, most casually noted that they put them aside. For example, many parents indicated that laundry tasks were always behind. One parent noted how she attempted to catch up on laundry by making an accommodation in the home tasks domain. The accommodation was buying a new washer. She reasoned that the new washer would allow her to clean clothes more quickly than her old washer had. However, she indicated that the new washer takes three times longer to wash clothes. Consequently, this mother adjusted her cultural value for completing laundry tasks. She resolved, "You don't have it? Check the dryer." This parent's experiences illustrate the culturally driven nature of some ecocultural features. In the provided example, the mother had adapted her thoughts and feelings toward a home task in a way that allowed it to remain neutral in relation to engagement rather than letting it become a barrier.

Ecocultural Features with Mixed Influences on Engagement

Parents reported that features in childcare tasks and supports domains had mixed influences on engagement. Parents provided mixed responses related to two features within the childcare tasks domain. Many parents reported that their children's

developmental needs had no influence on engagement. However, it is important to note that a subset of parents indicated that their children's developmental needs were a barrier to them engaging in particular activities. Specifically, they indicated that the amount of care and special care needed, due to child's special needs, posed constraints to engagement. These families reveal what ecocultural theorists call "hassle" or perceived child impact (Gallimore et al., 1989). Hassle mainly impacts home tasks, childcare tasks, and marital role relationship domains. Therefore, it is fitting that parents discussed hassle within the context of childcare tasks. They also reported hassle during discussions about home tasks and father involvement (which is closely related to marital role relationship). Despite barriers posed, these families determined activities that were appropriate for their families. Bernheimer and Weisner (2007) identify six types of hassle: behavioral, medical, communicative, social appropriacy, activity rate, and responsiveness. They indicate that parents who had children with a high hassle might engage in more accommodations than those who have children with low hassle. Parents in this study mainly identified behaviors behavioral and medical hassles and did mention accommodations they were making to balance barriers the hassle caused in other domains (e.g., providing their child the opportunity to watch television while they cooked dinner). However, in many cases, the child's hassle took precedence. Bernheimer et al. (1990) might say that that parents prioritizing needs related to their children's hassles are due to their needs' being linked to moral-cultural conduct. Essentially, if the parents failed to prioritize those needs, moral-cultural concerns might evolve and further impact other domains. Parents' reports regarding childcare also provides the opportunity to discuss

“within-culture variability” (Gallimore et al., 1993). This construct indicates that a homogeneous sample will not necessarily have homogeneous early learning opportunities, because participants construct early learning opportunities that are informed by culture. An example drawn from the study relates to sibling childcare. In one parent’s assessment it was not okay for her older daughter to help with any childcare tasks related to her son who was enrolled in early intervention. However, another parent indicated that her older daughter sometimes leaves school to care for her son while she works. However, there was an age difference in these siblings (the former was six and the latter was a teenager).

The final domain in which there were parallel findings was supports. Specifically, parents reported mixed influences regarding the formal support feature. Many participants regarded formal supports as having no influence on their engagement. However, other participants regarded it as being a constraint or resource. During the focus group interviews, parents were in agreement that pediatricians and the early intervention program were resources within their communities. However, they noted that few additional formal supports exist. Concluding thoughts from parents during each focus group were related to parents’ desire for additional formal supports geared toward children with disabilities in their communities. One parent said she wished there were more opportunities for her son to engage with children who have similar characteristics. Another parent noted that she would like parents who have children with disabilities in the community to come together, so that parents would have others with shared experiences to talk to and their children would have the opportunity to build self-esteem

among similar peers. Another parent expressed her desire for more resources to help her with getting her son therapies. The common thread among these comments was the desire for additional formal supports.

Insights on Remaining Ecocultural Features

Focus group and survey results did not align within five of the ecocultural domains. These domains were playmates, father/male participation, cultural impacts, information/knowledgebase, and community characteristics. These domains are toward the bottom of the ecocultural domain hierarchy in positions 6, 9, 10, 11, and 12, respectively. Because domains have a hierarchical order, from greater to lesser influence (Gallimore et al., 1989), it is reasonable that participants provided less consistent information for lower positioned domains.

Because inadequate insights into the influence of the aforementioned domains on engagement were provided, definitive results could not be concluded. During focus group discussions, parents indicated that various features were negative or positive, but did not provide insights about influence. This was true for father involvement and information/knowledgebase. The playmates domain was regarded as neither positive nor negative, nor was an influence identified. Cultural influence and community characteristics were described as having no influence during focus group discussions, but as a facilitator on surveys. This slight discrepancy is likely due to parents indicating that they rarely engaged in cultural activities and the diverse experiences that surfaced regarding community characteristics during the focus group discussion.

Although inconsistencies exist and influences are not available for the aforementioned domains, several insights are worth mentioning. During focus group discussions, parents either did not ascribe an influence for these domains or reported them as having no influence. For two of these domains (playmates and information/knowledgebase) parents reported that there was limited availability within their communities. There is uncertainty about why the lack of resources in these domains did not translate as a constraint, especially because parents reported that they wanted features in these domains to increase. Nevertheless, a plausible explanation is that parents perceive external resources differently than internal resources and, thus, are less likely to ascribe an influence. External resources include resources outside the immediate family environment (access of services, playmates, support, and information/knowledgebase), whereas internal resources include resources inside of the immediate family environment (work, home tasks, childcare tasks, safety, marital roles, and father/male involvement) (Keogh, Garnier, Bernheimer, & Gallimore, 2000). Cultural impacts and community characteristics were not mentioned in the study. However, they best fit within the external resources category.

It is likely that external resources are more ecologically driven than culturally driven. Therefore, parents are less able to adapt regarding external influences. The opposite is likely true for internal resources. Diamond and Kontos (2004) studied families enrolled in early intervention to examine relationships among the children's developmental needs, diagnosis, and families' resources and accommodations. They found that families with low incomes used fewer external resources to make

accommodations than families with higher incomes. Accordingly, it is plausible that families in this study relied less on external resources and, thus, perceived them as having no influence on their engagement.

Sustainability

Because early learning opportunities were the unit of analysis for sustainability and the presence of early learning opportunities were thought to mediate the influence of domains on child outcomes (Gallimore et al., 1989), it is important to understand the learning opportunities that parents provide for their children. The aforementioned interpretation of focus group and survey data strongly suggest that parents were sustaining engagement in early learning opportunities. Insights gained through additional survey findings further suggest that parents were sustaining engagement. The survey revealed that engagement in early learning opportunities was important to children and parents. Parents had high or medium engagement in 93% ($n=14$) of the activities that had high importance to them and their child and medium or high engagement in 70% ($n=21$) of all engagement items. Parents reported low engagement for 20% ($n=6$) of engagement items. About 67% ($n=4$) of these were the items that parents reported had low importance to them and their children (gardening and play activities). It is important to note that some activities within these categories (playing board games, playing video games, doing yard work, and planting trees) were not age appropriate for younger children. Parents' overall positive ratings on the ecocultural scale are another indication that resources in their counties generally fit their families' needs (social-ecological fit). Parents' perception of social-ecological fit, and the high degree of importance parents

ascribed to early learning opportunities, both suggest that there is also predictability in participants' provision of early learning opportunities. Predictability was also evident given the high frequency in which parents reported engaging in early learning opportunities. Cumulatively, these findings indicate that parents in this study were, indeed, able to provide and sustain early learning opportunities for their children.

Research indicates that there are different levels of sustainability regarding parents' provision of early learning opportunities for children with disabilities (Weisner et al., 2005). The parents in this study might be best described as moderate level sustainers or "improving/resilient." Following is a description of parents who are sustaining at this level:

These parents have resource fit problems, but in fewer domains than parents sustaining at low levels. They also feel less overwhelmed, although they are busy and active. They believe things are improving over time. Their proactivity and sometimes good fortune help them sustain their routine. These parents show effective adaptive responses in the face of threat; that is, they have some resilience, but not an easily sustainable routine. In some cases these parents think that their child is making good enough progress, or thought their child is nearly normal in development, so active accommodation and concern is not particularly important in the parents' opinions. These parents may not have as many resources, and may have more conflicts and difficulties in their families, and less balance, than parents at higher sustainability levels. On the other hand, they do not report high levels of dissatisfaction with their lives, nor with special services they have obtained. (Weisner et al., 2005, p. 55)

Implications

Overall, parents indicated that ecocultural features had positive or no influence on their engagement and that they were able to sustain engagement with their children. Parents' use of accommodations indicates that families were proactively constructing an

ecocultural niche that served to sustain early learning opportunities. Their use of accommodations is also theoretical evidence that they were sustaining early learning opportunities, because accommodation predicts the sustainability of family routines (Bernheimer & Weisner, 2007). However, implications for the provision of additional resources in rural communities are necessary. Additionally, professionals who work with families on behalf of children with special needs should capitalize the use of families' resources during the development and provision of services to families.

Parents are constantly reconstructing their ecocultural niche to make activities that they find meaningful available. They may be less likely to notice constraints, because they are proactively addressing them. Therefore, existing constraints manage to loom in the background as a part of families' experience without them noticing. In short, it seems that parents have adapted their perceptions to match their overall experiences and circumstances. These perceptions should not be judged, but assessed cautiously in relation to family outcomes. Parents, undoubtedly, have the ability to mediate influences on outcomes for their families. However, the discussion of parents' roles as active agents in providing early learning opportunities, despite ecological and cultural constraints, should not detract from wide ranging disparities that exist in some rural areas. Instead, it should serve as an opportunity to develop a deeper understanding of the experiences of families in rural communities who have young children with disabilities. Such an understanding might lead to the provision of resources that enable families to further accommodate their families' needs related to sustaining early learning opportunities.

Parents indicated a “scarcity of resources” in one half of the ecocultural domains: work, access, playmates, supports, father involvement, and information/knowledgebase domains. Some urban counties in the United States experience poverty at a high rate; however, poverty rates have been persistently high in many rural counties for decades (Miller & Weber, 2014). Despite the existence of poverty in rural and urban areas, rural areas have differing access to resources, economic structures, institutions, and social norms compared to urban areas (Rural Poverty Research Center, 2004). These differences are, in part, a consequence of the spatial make-up of rural areas and exemplify the scarcity of resources available to families. For example, economic structures limit the types of job opportunities that prevail in rural areas and institutions (e.g., healthcare, education) predicate the amount and type of knowledge available to families. Unfortunately, the ecological resources for families in rural areas are few. Thus, families who have children with disabilities are faced with various challenges, including long commutes, sparse information about their child’s needs, and limited networking opportunities (Elford, 2015).

Ecocultural theorists posit that whether or not a parent deems an ecocultural feature a constraint or resource depends on how they use the feature in within their socially constructed econiche (Gallimore et al., 1989). This notion does not take the availability of resources into consideration. Ecocultural theorists further assert that families make accommodations to sustain meaning routines within their families regardless of the amount of resources they have (Weisner et al., 2005). This appears to hold some truth. However, it does not take differences in the quality of child and family

outcomes of these families compared to families with more resources into account. Thus, the amount of resources available in rural communities deserves attention, especially with regards to the types of interventions Part C service providers engage in with families.

The field of early childhood education supports the use of strengths-based perspectives. Thus, it is also important that professionals who work with families who have children with special needs to understand their resources. Safety and social cohesion are two resources that are consistent in rural areas; however, these resources are often evident in only segregated urban localities (Maggi et al., 2006). Through the examination of resources that exist for families within various family domains, this study has provided insights about the relationship between commonly accepted resources in rural communities and parental engagement. Professionals should keep these resources in mind when assessing the resources of individual families. They should also aim to develop interventions with families' resources in mind in order to improve the likelihood that families will sustain developmentally appropriate activities for their children.

Future Research and Practice

The results from this study provide a foundation for understanding associations between the influences of a wide range of ecocultural features and the sustainability of early learning opportunities for families in rural areas who have young children with disabilities. Thus, it has provided insights into many future research and practice directions. Some directions that which are timely in the field of early childhood special education are presented below.

Regarding research, the examination of research designs that are appropriate for small sample sizes is essential. Given the small sample sizes likely in rural communities, the exploration of descriptive methods that have the capacity to determine associations between multidimensional constructs is needed. In the meantime, follow-up experimental studies might be appropriate for examining causal relationships between ecocultural factors and sustainable early learning opportunities. Additionally, research that discriminates within case differences in engagement for parents in rural communities is important. Such research might be used to compare how well parents from rural areas with low incomes and high incomes or parents who have children with developmental delays rather than disabilities are able to sustain engagement given the ecocultural constraints and resources in their communities. Finally, an inductive analysis of parents' perspectives on the relationship between ecocultural features and engagement is needed to refine theoretical assumptions about relationships between the two constructs.

Several practical implications also arose from results. Tools that assist in determining relationships between engagement and child outcomes are needed. In particular, associations need to be assessed between child outcomes and (a) the level at which parents are sustaining engagement and (b) how well families are sustaining early learning opportunities over time. Such tools might provide insights about achievement gaps that exist between young children from rural and urban areas (Clarke, 2014; Roscigno & Crowley, 2001). Additionally, families' resources, priorities, and concerns need to be broadly assessed to ensure that influences inside and outside of the immediate family are equally regarded and incorporated into Part C individualized family service

plans. Considerations of service delivery options that complement a broadened contextual understanding of families' resources, priorities, and concerns also need to be made. For instance, a mobile interdisciplinary team option might alleviate challenges related to the amount and quality of service access and information sources.

Limitations

This study had several limitations. First, the limited number of participants limits the generalization of results to samples with similar characteristics. The sample size also prevented inferential analyses. Thus, variables were analyzed independently using descriptive statistics. Consequently, the examination of associations among variables was limited. However, results from descriptive analyses provide a foundation for understanding associations between ecocultural influence and engagement as well as interactions between engagement and sustainability dimensions. A second limitation is that one focus group had more participants than the other two, which means that one group's perspectives might have had a greater influence on results than the others. A third limitation is that 71% ($n=12$) of families in this study had incomes under the poverty threshold given their family size. This was much higher than state and national percentages, which are 17.8% and 15.8%, respectively (US Census, 2013). Finally, 82% ($n=14$) of participants were White. This percentage is also higher than state and national estimates, which are 71.7%, and 77.7%, respectively (US Census, 2013). The influence of ecological influences on parents of different races and socioeconomic backgrounds is unclear. However, results from this study may reflect the perspectives of parents in rural North Carolina who are White and have limited income.

Conclusion

This study was designed to understand how ecocultural features operate within the ecocultural niche of families from rural communities who have children with disabilities. Results contribute to a contextualized understanding of sustainable early learning opportunities by highlighting constraints and resources that are characteristic of rural counties in North Carolina, alongside their influence on engagement.

The unique ecocultural experiences of parents in rural communities have been sparsely researched. Understanding these experiences is important because they influence the learning opportunities parents provide for their children. This study contributes to the fields of early intervention and early childhood special education by drawing attention to the types of activities parents in rural communities engage in with their children and also features within the community that impact their engagement.

Parents indicated that most of the early learning opportunities presented in this study were important to them and their children. Thus, there might have been a natural propensity for parents to sustain them. However, their capacity to sustain them required accommodations in various domains. The ecocultural domains assisted with facilitating engagement were: (a) safety, (b) quality of marital relationship, and (c) childcare tasks. Domains that had no influence on engagement were: (a) work, (b) access to services, and (c) home tasks. Parents' identification of some ecocultural features as having no influence on engagement can be, in part, attributed to parents actively making accommodations to counter negative influences within their environments. They can also

be attributed to parents' perception that some resources within their communities are scarce.

Overall, results from this study allow us to view families through a positive lens. It also provides professionals within the field of early childhood special education with meaningful contextual information that they can use to support families in rural areas, who are often underserved.

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APPENDIX A
ECOCULTURAL DOMAINS AND FEATURES

1. Family Subsistence and Financial Base

- a. Employment history of parents
- b. Hours worked and flexibility of hours
- c. Tenure and security of employment, stability and regularity of income sources
- d. Level of employment, occupational rank
- e. “Job” vs. “career” vs. “calling”
- f. Work done at home, very near to home
- g. Amount of unearned income
- h. Equity available to family, amounts ever used
- i. Extent of self-direction of work, complexity or organization of work, control over work process or product (Kohn, 1977)

2. Accessibility of Health and Educational Services

- a. Distance from home to employment, services, etc.
- b. Means and cost of transportation available and used
- c. Schedule juggling, problems in access (hours open, timing, family separation/integration)
- d. Flexibility of services (hours, location, etc.)
- e. Required or voluntary parent group participation (as part of child services or otherwise)

- f. Care or aid provided in home for child by outside professionals
- g. Role of Regional Center for identified developmentally delayed children

3. Home and Neighborhood Safety and Convenience

- a. Yard vs. no yard, fencing, neighborhood play areas, and accessibility to child
- b. Architectural issues, house safety and convenience (space available, one or two stories, interior organization and design, childproofing)
- c. Neighborhood safety measures perceived by parents, judged by observers, and assessed by city statistics
- d. Use of neighborhood places and services by child and family (Medrich, Roizen, Rubin, & Buckley, 1982)

4. Domestic Task and Chore Workload (Excluding Childcare) and Family

Division of Labor

- a. Chore and task inventory: who does these, frequency, and timing; level of family concern over work and cleanliness, etc.
- b. Absolute workload (numbers of persons in family, time spent, etc.)
- c. Perceived workload pressures on parents and children
- d. Complexity of chores and who does them; ages at which children take on work with responsible, self-managed sequences of tasks (Nerlove, Roberts, Klein, Yarbrough, & Habicht, 1984)
- e. Task sharing, complementary, specialization of roles

- f. Exclusivity of work or available alternatives to person with primary responsibility
- g. Children's work outside home (if any)
- h. Personnel available in family for aid (family size and composition, non-kin members)

5. Childcare Tasks

- a. Personnel available and used (parents, grandparents, other kin, siblings, friends, neighbors)
- b. Number and variety of specific childcare jobs
- c. Amount of care and supervision time daily, degree of direct responsibility, control and monitoring required (Weisner & Gallimore, 1977)
- d. Additional childcare due to developmentally delayed child's particular problems (vs. routine care for other children)
- e. Specialized settings or interactions created by child's problems (program requirements, reading, special babysitting skills)
- f. Extent of specialized *instrumental* childcare jobs vs. *social* involvements or training, etc.

6. Children's Play Groups

- a. Age, sex, and kinship category of playmates, including family, kin, and neighborhood groups
- b. Frequency of participation in playgroups

- c. Parent-organized and created playgroups; frequency, type, and hassle involved in such groups
- d. Extent of parental and/or older siblings structuring and intervention in peer play groups; degree of supervision and monitoring

7. Marital Role Relationships

- a. Quality of couple roles (companionate/intimate, degree of role separation, sharing of decision-making, domains of control and responsibility)
- b. Degree of task complementarity (fixed role vs. shared functioning styles)
- c. Degree of socioemotional involvement and sharing in decisions involving developmentally delayed child
- d. Decision-making style

8. Networks and Organizational Involvement

- a. Formal groups (church, organizations, parents' groups, etc.)
- b. Informal (neighbors, kin, friends, casual contacts with professionals [chats after school, etc.]); parents' contacts with other parents of handicapped children
- c. Degree of instrumental vs. socioemotional involvement with such groups
- d. Degree of support by groups vs. aid given to others in groups

9. Role of Father and Mother in Childcare

- a. Degree of participation (tasks, marital role, and childcare data)
- b. Organizational involvement (see section 8)

- c. Quality of involvement with spouse regarding developmentally delayed child (dominant, coequal, supportive, avoidant)
- d. Nonbiological males involved in home, roles of alternate male caretakers
- e. Focus of father's involvement with developmentally delayed child (instrumental, supervision and management, recreational, emotional, etc.)
- f. Sibling and other nonparental care replacing or complementing parental care

10. Sources of Child Cultural Influence

- a. Overall TV viewing, games, organized sports and activities, family cultural activities, etc.
- b. Extent of parental management, control in presentation of information for child

11. Sources of Parental Information and Goals

- a. Books, lectures, training, classes, required parent groups
- b. Special job, interest, or status giving access to information (mother is registered nurse and knows about programs, father knows psychologist in field)
- c. Variety of alternative conceptions of treatment, etiology, etc. available to family (megavitamins, special programs, etc.); are parents aware of a range of ideas and developments regarding developmental delay?

12. Community Heterogeneity

- a. Variety of social and cultural views of developmental delay, behavior and attitudes toward handicaps, etc. (see 11)
- b. Social and cultural views and attitudes toward conventional success or achievement in community, the value of education, etc.
- c. Diversity of local community as a reference point for child's status (is community homogeneous and child, therefore, unique; does he/she “stand out” on some dimensions and not others [appearance, speech, movement, cognitive ability, etc.]; are these selectively important in community?)

APPENDIX B
EARLY LEARNING OPPORTUNITY CLUSTERS

Family Routines	Family Rituals
Household Chores	Family Talks
Cooking/Preparing Meals	Saying Grace at Meals
Caring for Pets/Animal	Religious/Spiritual Readings
Doing Errands	Praying
Food Shopping	Family Meetings
Play Activities	Child Routines
Art Activities/Drawing	Brushing Teeth
Playing Board Games	Washing Hands/Face
Playing Video Games	Cleaning Up Room
Entertainment Activities	Picking Up Toys
Dancing/Singing	Toileting/Going to Bathroom
Watching TV/Videos	Dressing/Undressing
Listening to Music	Family Celebrations
Playing Alone	Holiday Dinners
Parenting Routines	Family Member's Birthdays
Child's Bath time	Decorating Home (Holidays)
Child's Bedtime/Naptime	Literacy Activities
Child's Wake-Up Times	Reading/Looking at Books

Meal Times	Telling Child Stories
Fixing/Cutting Child's Hair	Adult/Child Play Times
Socialization Activities	Taking Walks/Strolls
Family Gatherings	Bedtime Stories
Picnics	People Coming/Going (Hellos/Good-byes)
Having Friends Over to Play	Cuddling with Child
Visiting Neighbors	Physical Play
Sleepovers	Riding Bike/Wagon
Gardening Activities	Playing Ball Games
Doing Yard Work	Water Play/Swimming
Planting Trees/Flowers	Rough Housing
Growing Vegetable Garden	

APPENDIX C
DEMOGRAPHIC FORM

Date: _____

ID Code: _____

Location of
home: _____

Name of CDSA: _____

Parent Information				
1.	Name	_____		
2.	Age	_____		
3.	I am (check all that apply)	Married <input type="checkbox"/>	Single <input type="checkbox"/>	Divorced <input type="checkbox"/>
		Mother <input type="checkbox"/>	Father <input type="checkbox"/>	Other (specify) _____
4.	Racial Group	Black <input type="checkbox"/>	White <input type="checkbox"/>	Asian <input type="checkbox"/> Hispanic <input type="checkbox"/>
		Native Hawaiian or Other Pacific <input type="checkbox"/> Islander	American Indian or Alaska Native <input type="checkbox"/>	Two or More Races <input type="checkbox"/>
5a.	Total number of people living in household	_____		
5b.	Place a check by members of your household according to their relationship to your child. Please list ages of children who are under 18 years old.	Relationship	Age	Relationship
		Mother		Cousin
		Father		Grandmother
		Stepmother		Grandfather
		Stepfather		Uncle
		Brother		Aunt
		Sister		Other

6.	Yearly family income	Under \$15,000 <input type="checkbox"/>	\$15,000-\$24,999 <input type="checkbox"/>	\$25,000-\$34,999 <input type="checkbox"/>	
		\$35,000-\$49,999 <input type="checkbox"/>	\$50,000-\$74,999 <input type="checkbox"/>	\$75,000-\$99,999 <input type="checkbox"/>	
		\$100,000 and above <input type="checkbox"/>			
Child's Developmental Information					
7.	Age	_____			
8.	How did you hear about the early intervention program?	Pediatrician <input type="checkbox"/>	Childcare center <input type="checkbox"/>	Other (specify) _____	
		Program participant <input type="checkbox"/>	CDSA <input type="checkbox"/>		
9.	Disability label (specify)	_____		Current IFSP? Yes <input type="checkbox"/> No <input type="checkbox"/>	
10.	Reason for enrollment in early intervention?	Cognitive delay <input type="checkbox"/>	Physical delay <input type="checkbox"/>		
		Communication delay <input type="checkbox"/>	Social/emotional delay <input type="checkbox"/>		
		Adaptive delay <input type="checkbox"/>	Visual impairment <input type="checkbox"/>		
		Hearing impairment <input type="checkbox"/>	Medical/genetic disorder <input type="checkbox"/>		
		Unknown <input type="checkbox"/>	Other(list)_____		
11.	Which early intervention services does your child/family receive and what was your child's age when services started.	Service	Age	Service	Age
		Speech/language therapy <input type="checkbox"/>		Early interventionist <input type="checkbox"/>	
		Occupational therapy <input type="checkbox"/>		Respite <input type="checkbox"/>	
		Physical therapy <input type="checkbox"/>		Other <input type="checkbox"/>	
		Service coordination <input type="checkbox"/>			
Family Characteristics				Yes	No
12.	Please place a check under yes or no for each item to the right to indicate whether or not	1. Is your primary source of income from employment			
		2. Are health or education services within 10 miles of your home			
		3. Is your home/neighborhood safe			
		4. Do household members share responsibility for completing tasks/chores			
		5. Does primary caretaker feel equipped to care for child with disability			

	the item applies to your family.	6. Does child with disability have playmates who are a similar age		
		7. Do both parents have similar feelings about child's disability/treatment		
		8. Is the family involved in a support group (church, parent group, etc.)		
		9. Does your family have support from extended family		
		10. Does your family regularly engage in cultural activities		
		11. Does your family have adequate information about your child's disability		
		12. Are attitudes of people in your community mostly positive toward your child		

APPENDIX D

PARENT DEMOGRAPHICS AND CHILD'S DEVELOPMENTAL INFORMATION

Category	Variable	Number	Percentage
Relationship to child	mother	15	88.24
	father	1	5.88
	other	1	5.88
Marital Status	married	11	64.71
	single	5	29.41
	divorced	1	5.88
Racial-Ethnic Group	Black	1	5.88
	White	14	82.35
	Hispanic	1	5.88
	two or more races	1	5.88
Yearly Family Income	Under \$15,000	7	41.18
	\$15,000-\$24,999	4	23.53
	\$25,000-\$34,999	3	17.65
	\$35,000-\$49,999	1	5.88
	\$50,000-\$74,999	1	5.88
	\$75,000-\$99,999	1	5.88
Parent Residing with Child	Mother	17	100.00
	Father	11	64.71
Ages of Household Members (Excluding Parents and Child participants)	0-5 years old	5	29.41
	6-18 years old	4	23.53
	both	6	35.29
	neither	2	11.76
Referral Source	Pediatrician	9	52.94
	Program participant	2	11.76
	CDSA	5	29.41
	Other	1	5.88

Child's Age	1	4	23.53
	2	11	64.71
	3	2	11.76
Reason for Referral	Cognitive delay	3	17.65
	Physical delay	6	35.29
	Communication delay	13	76.47
	Social/emotional delay	2	11.76
	Adaptive delay	2	11.76
	Visual impairment	0	0
	Hearing impairment	0	0
	Medical/genetic condition	3	17.65
	Unknown	0	0
	Other (Sensory)	1	5.88
Disability Label	autism	2	11.76
	cerebral palsy	1	5.88
	congenital heart defect	1	5.88
	developmental delay	3	17.65
	Down Syndrome	2	11.76
	none	8	47.06
Current Services	Speech therapy	13	76.47
	Occupational therapy	5	29.41
	Physical therapy	8	47.06
	Service coordination	6	35.29
	Early intervention	6	35.29
	Respite	0	0
	Other	0	0

APPENDIX E

SURVEY

Name: _____		ID Code: _____
Date: _____		
Directions:	<p>Part 1 of this survey has three sections: Parent-Child Engagement in Activity, Importance of Activity to Parent, and Importance of Activity to Child. In each section, you are provided with six choices. Please pick one choice for items 1-30 by circling the choice that best describes your response in each section. The first item, which is shaded red below (A. Example: mealtime), is provided as an example. A parent would place a check under Never, Never Important, and Never Important if he or she does not engage in mealtime with his or her child and this activity is not important to the parent nor the child. After you complete Part 1, please turn your survey over and complete Part 2.</p>	

Part 1

Item	How often do you engage?						Importance to you?						Importance to child?					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
	1 = Never 2 = At least each year 3 = At least once each month 4 = At least once each week 5 = At least once each day 6 = Multiple times each day						1 = Never Important 2 = Rarely Important 3 = Sometimes Important 4 = Often Important 5 = Most of the Time Important 6 = Always Important						1 = Never Important 2 = Rarely Important 3 = Sometimes Important 4 = Often Important 5 = Most of the Time Important 6 = Always Important					
A. Example: mealtime	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
1. household chores	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
2. cooking/preparing	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
3. caring for pets	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
4. child's bath time	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
5. child's bedtime/naptime	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
6. child's wake-up time	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
7. brushing teeth	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
8. washing hands/face	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
9. cleaning up (child's) room	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
10. reading/looking at books	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
11. telling child stories	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
12. adult-child playtime	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
13. riding bike/wagon	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
14. playing ball games	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
15. water play/swimming	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6

16. art activities/drawing	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6
17. playing board games	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6
18. playing video games	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6
19. dancing/singing	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6
20. listening to music	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6
21. watching TV/videos	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6
22. family talks	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6
23. saying grace at meals	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6
24. religious/spiritual readings	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6
25. family gatherings	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6
26. picnics	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6
27. having friends over to play	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6
28. doing yard work	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6
29. planting trees/flowers	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6
30. growing vegetable garden	1	2	3	4	5	6		1	2	3	4	5	6		1	2	3	4	5	6

Turn over to complete Part 2

Directions:	<p>On Part 2 of this survey, you are asked how items 1-26 influence your engagement in activities with your child on most days. Please circle one of the five choices provided for items 1-26 to show to what extend each item is a constraint or resource. In Example B, marked in red below, nearby shopping is a negative influence/constraint on most days, so number (1) has been circled.</p>	ID Code: _____
--------------------	---	-----------------------

Part 2

Topic	Item	<div> <div>Constraint to Parent-Child Engagement</div> <div>No Influence</div> <div>Resource to Parent-Child Engagement</div> </div>				
		(1)	2	3	4	5
Work	B. Example: Nearby shopping					
	1. hours worked and flexibility of hours	1	2	3	4	5
	2. employment responsibilities	1	2	3	4	5
Accessibility	3. amount of income and consistency of income	1	2	3	4	5
	4. distance from home to employment and services	1	2	3	4	5
	5. cost of transportation available	1	2	3	4	5
Safety	6. flexibility of services (hours opened, location)	1	2	3	4	5
	7. safe neighborhood play areas	1	2	3	4	5
	8. house/living conditions	1	2	3	4	5

Home Tasks (not childcare)	9. completing household chores and tasks	1	2	3	4	5
	10. parents and children's thoughts and feelings about workload	1	2	3	4	5
	11. people available to assist with chores/tasks (family size/composition, non-kin help)	1	2	3	4	5
Childcare Tasks	12. people available/used for childcare (parents, grandparents, friends, neighbors)	1	2	3	4	5
	13. amount of care/supervision, responsibility, monitoring, etc. required for children	1	2	3	4	5
	14. additional childcare or programs due to child's special needs (vs. routine care for other children)	1	2	3	4	5
Playmates	15. age, sex, and kinship of playmates for child with special needs in home and community	1	2	3	4	5
Marital Relations	16. quality of parents' roles (intimate bond, shared decision-making/responsibility)	1	2	3	4	5
Supports	17. formal support groups (church, organizations, parent groups)	1	2	3	4	5
	18. informal support (neighbors, kin, friends, parents of children with special needs)	1	2	3	4	5
Father/Male Participation	19. quality of relationship with male spouse regarding child (dominant, coequal, supportive, avoidant)	1	2	3	4	5
	20. nonbiological males involved in home, roles of alternate male caretakers	1	2	3	4	5
	21. father involvement with developmentally delayed child (supervision, recreational, emotional, etc.)	1	2	3	4	5
Cultural Impacts	22. overall TV viewing, games, organized sports and activities, family cultural activities	1	2	3	4	5
Information/Knowledge base	23. books, lectures, trainings, classes, formal parent groups	1	2	3	4	5
	24. special job, interest, or personal contacts who provide information about disabilities	1	2	3	4	5

Community characteristics	25. Social and cultural views/behaviors and attitudes toward children with disabilities		1	2	3	4	5
	26. Diversity in local community (mix of age, race, ability, etc.)		1	2	3	4	5

This concludes the survey.
Thank you for participating!

APPENDIX F
FOCUS GROUP INTERVIEW PROTOCOL

Time of interview:	
Date:	
Place:	
Interviewer:	
Interviewee:	
Duration of interview:	
<p>Introduction of self and topic: Hi. How are you today? Thanks for agreeing to be part of this focus group. We appreciate your willingness to participate.</p> <p>We are here today to learn about community and cultural influences you experience by living in a rural area and how these influences related to your interactions with your child.</p> <p>I will moderate this group, which means I will ask questions and facilitate the discussion today. The assistant moderator will take notes.</p> <p>There are a few ground rules that will help the group run smoothly.</p> <p>1. WE WANT YOU TO DO THE TALKING.</p>	

We would like everyone to participate.

I may call on you if I haven't heard from you in a while.

2. THERE ARE NO RIGHT OR WRONG ANSWERS

Every person's experiences and opinions are important.

Speak up whether you agree or disagree.

We want to hear a wide range of opinions.

3. WHAT IS SAID IN THIS ROOM STAYS HERE

We want everyone to feel comfortable sharing when sensitive issues come up.

4. WE WILL BE AUDIO RECORDING THE GROUP

We want to capture everything you have to say.

I will not identify anyone by name in the report. Your comments will remain anonymous.

(From: Elliott et al. (2005) Guidelines for Conducting a Focus Group.)

This focus group is will last about 2 hours. After the first hour, we will take a 10 minute break. After the break, we will continue with our discussion. At the end, we will summarize our discussion.

Opening Question

What was the last activity you engaged in with your child?

Domain Questions

1. How do the work conditions facilitate or act as a barrier to your engagement with your child?
2. How does accessibility facilitate or act as a barrier to your engagement with your child?
 - a. Probe: Are services, programs, resources, etc. near? Do they fit your family's needs?
3. How does safety (in your home and neighborhood) facilitate or act as a barrier to your engagement with your child?
4. How do household chores facilitate or act as a barrier to your engagement with your child?
 - a. Probe: Answer in relation to the number of chores you complete, the amount of assistance you have from family members, etc.
5. How do childcare tasks facilitate or act as a barrier to your engagement with your child?
 - a. Probe: How much supervision does your child need? Do you have assistance with childcare needs? Does your child participate in special programs/have special services due to needs?
6. How do the playmates available to your child facilitate or act as a barrier to your engagement with your child?
 - a. Probe: Does your child have siblings or friends his or her age?

7. How does the quality of your relationship with your spouse/significant other facilitate or act as a barrier to your engagement with your child?
8. How do parent networks or organizations facilitate or act as a barrier to your engagement with your child?
 - a. Probe: Are there supports in your community for families who have children with disabilities or delays? Do they fit your families' needs?
9. How does your child's father/your participation (if father participant) patterns facilitate or act as a barrier to your engagement with your child?
10. How do cultural influences or activities (TV programs, community events, etc.) facilitate or act as a barrier to your engagement with your child?
11. How does your knowledge of your child's disability facilitate or act as a barrier to your engagement with your child?
 - a. Probe: Do you think you have adequate knowledge or access to knowledge?
12. How do the people in your community facilitate or act as a barrier to your engagement with your child?
 - a. Probe: What are their attitudes toward children with disabilities?

Closing Questions

Is there anything else that you feel is important to share?

Based on our discussion today, how would you summarize the impact of the factors we have discussed on your ability to sustain engagement in learning opportunities with your child? Does this summary seem accurate?

APPENDIX G

FIELD NOTE GUIDE

Name of study: The Ecocultural Factors that Impact the Sustained Engagement in Early Learning Opportunities by Parents from Rural Communities			
Focus Group Information			
Date		Location	
Start time		Duration	
Number of participants			
Seating Diagram			

Name of moderator		Name of assistant moderator	
Notes			

APPENDIX H
IRB APPROVAL

To: Katrina Cummings
Specialized Education Services
3610 Mountain Brook Circle, Durham, NC 27704

From: UNCG IRB

Approval Date: 2/20/2015
Expiration Date of Approval: 2/19/2016

RE: Notice of IRB Approval by Expedited Review (under 45 CFR 46.110)
Submission Type: Renewal
Expedited Category: 7.Surveys/interviews/focus groups,6.Voice/image research recordings
Study #: 14-0084
Study Title: The Ecocultural Factors that Impact Parents from Rural Communities Sustained Engagement in Early Learning Opportunities

This submission has been approved by the IRB for the period indicated.

Study Description:

Purpose

This study will explore the ecological and cultural factors that impact families from rural communities in North Carolina and their relationship to parents' sustained engagement in early learning opportunities/home routines.

Participants

30–40 participants will be recruited for this study. The participants will be parents of children ages six months to three years old who are currently receiving early intervention services and live in rural communities in North Carolina, including Craven, Moore, Surry, and Jackson counties.

Measures

This study will employ quantitative and qualitative methodologies, sometimes collectively referred to as mixed methods, including a survey and a focus group protocol.

Submission Description:

I would like to broaden the target counties to include Craven, Moore, Surry, Jackson, and other rural counties, dependent on recruitment goals.

Study Specific Details:

This study involves direct interaction or intervention with subjects. Continue as approved.

Regulatory and other findings:

- **If your study is contingent upon approval from another site (recruitment sites in the additional counties that were added to the 2/20/15 renewal), you will need to submit a modification at the time you receive that approval.**

Investigator's Responsibilities

Federal regulations require that all research be reviewed at least annually. It is the Principal Investigator's responsibility to submit for renewal and obtain approval before the expiration date. You may not continue any research activity beyond the expiration date without IRB approval. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.

Signed letters, along with stamped copies of consent forms and other recruitment materials will be scanned to you in a separate email. **Stamped consent forms must be used unless the IRB has given you approval to waive this requirement.** Please notify the ORI office immediately if you have an issue with the stamped consents forms.

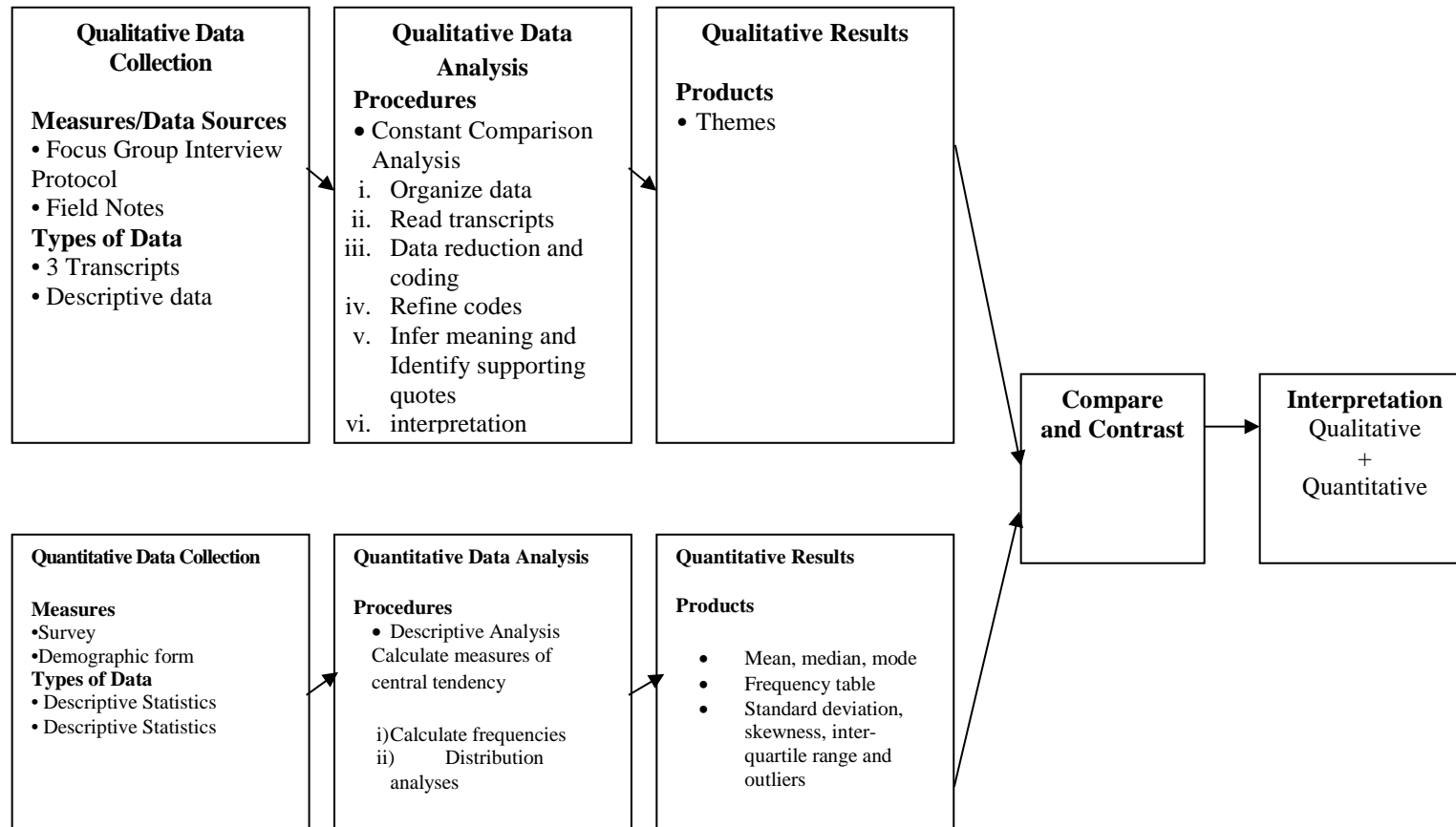
You are required to obtain IRB approval for any changes to any aspect of this study before they can be implemented (use the modification application available at <http://integrity.uncg.edu/institutional-review-board/>). Should any adverse event or unanticipated problem involving risks to subjects or others occur it must be

reported immediately to the IRB using the "Unanticipated Problem-Adverse Event Form" at the same website.

Please be aware that valid human subjects training and signed statements of confidentiality for all members of research team need to be kept on file with the lead investigator. Please note that you will also need to remain in compliance with the university "Access To and Retention of Research Data" Policy which can be found at http://policy.uncg.edu/research_data/.

APPENDIX I

METHODS DESIGN



APPENDIX J

PERMISSION TO CONTACT

The Ecocultural Factors that Impact Parents' from Rural Communities**Sustained Engagement in Early Learning Opportunities**

Dear _____,

I am a third year doctoral student in the Specialized Education Services Department at the University of North Carolina at Greensboro. I am completing a study for a requirement, but also because I am passionate about working with families.

If your family receives services through the North Carolina Infant-Toddler Program (commonly known as early intervention or developmental therapy) and you live in a rural county, I am inviting you to share some of your experiences.

I hope that the information I gather will provide agencies and service providers with information about community and cultural factors that impact families in rural areas. In addition, I believe that the information will provide knowledge about increasing opportunities for young children to develop and learn in their home environment.

As a participant in this study, you will be asked to complete:

- 1) A demographic form
- 2) A survey
- 3) A focus group interview (Note: A focus group interview is similar to a roundtable discussion. It is designed to gather a range of ideas from a group of similar participants.)

It will take approximately three hours to complete the demographic form, survey, and focus group interview. For your convenience, childcare and a meal will be provided. Your participation in any part of this research project is voluntary.

As a token of appreciation, for participation in all parts of the study, you will receive a \$70.00 gift card and a children's book.

If you have questions:

My name is Katrina Cummings. Feel free to contact me with any questions you might have about the study. My phone number is 919-201-7416. My email address is kpcummin@uncg.edu.

This study has been reviewed and has received ethics clearance from the Institutional Review Board at the University of North Carolina at Greensboro.

Please fill in the information below and return it to your service provider.

☐ **Yes. I am interested in participating in this study.**

Please contact me:

Name_____

Phone_____

Email_____

☐ **No. I am not interested in participating in this study.**

APPENDIX K

SCREENING FORM

I am calling to follow up about your interest in the research study about environmental and cultural factors that impact the engagement patterns of families from rural counties that have children with disabilities. I need to ask you a few questions to ensure that you qualify for participation.

Questions	Yes	No
1. Do you have a child who is enrolled in early intervention?		
2. In what county do you live?		
3. Are you at least 18 years old?		
4. Do you speak and understand English fluently?		

If no to any of questions 1–4: Based on your answers, you do not qualify to participate in the research study. Thanks for your time.

If yes to any of questions 1–4: Based on your answers, you do qualify to participate in the study. Please share your preferences for meeting.

Morning	Noon	Evening
Weekday	Weekend	

Thank you for your time. You will receive an invitation in the mail that includes the date, time, and location for the study, as well as an outline of interview.

Do you have any questions at this time? Thank you again and enjoy the rest of your day.

APPENDIX L

INVITATION TO PARTICIPATE

**The Ecocultural Factors that Impact Parents' from Rural Communities
Sustained Engagement in Early Learning Opportunities**

Dear _____,

Thank you for expressing interest in my study and helping me learn more about your community and your engagement with your child. You have been selected to participate.

The date, time, and location for the study are listed below.

Date: _____

Time: _____

Location: _____

Please be reminded that childcare and a meal will be provided. Please arrive 30 minutes before the time list above if you would like childcare services while you participate in the study.

I look forward to seeing you!

Katrina P. Cummings

If you have questions:

My name is Katrina Cummings. Feel free to contact me with any questions you might have about the study. My phone number is 919-201-7416. My email address is kpcummin@uncg.edu.

APPENDIX M
NOTETAKER GUIDE

Opening Question			
What was the last activity you engaged in with your child?			
Domain Questions	Barrier to Engagement	Facilitator of Engagement	Name of Participant Commenting
1. How do the work conditions facilitate or act as a barrier to your engagement with your child?			
2. How does accessibility facilitate or act as a barrier to your engagement with your child?			
a. Probe: Are services, programs, resources, etc. near? Do they fit your family's needs?			
3. How does safety (in your home and neighborhood) facilitate or act as a barrier to your engagement with your child?			
4. How do household chores facilitate or act as a barrier to your engagement with your child?			
a. Probe: Answer in relation to the number of chores you complete,			

the amount of assistance you have from family members, etc.			
5. How do childcare tasks facilitate or act as a barrier to your engagement with your child?			
a. Probe: How much supervision does your child need? Do you have assistance with childcare needs? Does your child participate in special programs/have special services due to needs?			
6. How do the playmates available to your child facilitate or act as a barrier to your engagement with your child?			
a. Probe: Does your child have siblings or friends his or her age?			
7. How does the quality of your relationship with your spouse/significant other facilitate or act as a barrier to your engagement with your child?			
8. How do parent networks or organizations facilitate or act as a barrier to your			

engagement with your child?			
a. Probe: Are there supports in your community for families who have children with disabilities or delays? Do they fit your families' needs?			
9. How does your child's father/your participation (if father participant) patterns facilitate or act as a barrier to your engagement with your child?			
10. How do cultural influences or activities (TV programs, community events, etc.) facilitate or act as a barrier to your engagement with your child?			
11. How does your knowledge of your child's disability facilitate or act as a barrier to your engagement with your child?			
a. Probe: Do you think you have adequate knowledge or access to knowledge?			
12. How do the people in your community facilitate or act as a barrier to your engagement with your			

child?			
a. Probe: What are their attitudes toward children with disabilities?			
Closing Questions			
1. Is there anything else that you feel is important to share?			
2. Based on our discussion today, how would you summarize the impact of the factors we have discussed on your ability to sustain engagement in learning opportunities with your child? Does this summary seem accurate?			

APPENDIX N

FOCUS GROUP ECOCULTURAL CODING INDEX

Level 1 Code	Level 2 Code	Description	Definitions	Code	Barrier	No Influence	Facilitator
1. Family Subsistence and Financial Base	1.1	Employment history of parents	same				
	1.2	Hours worked and flexibility of hours	same				
	1.3	Tenure and security of employment, stability and regularity of income sources	same				
	1.4	Level of employment, occupational rank	same				
	1.5	“Job” vs. “career” vs. “calling”	same				
	1.6	Work done at home, very near to home	Only include work for wages				
	1.7	Amount of unearned income	including federal assistance, or other regular allowances not earned from working				
	1.8	Equity available to family, amounts ever used	for example- safety net				
	1.9	Extent of self-direction of work, complexity or organization of work, control over work process or product	personal capacity to sustain work				

2. Accessibility of Health and Educational Services	2.1	Distance from home to employment, services, etc	same				
	2.2	Means-and cost of transportation available and used	same				
	2.3	Schedule juggling, problems in access (hours open, timing, family separation/integration)	same				
	2.4	Flexibility of services (hours, location, et)	same				
	2.5	Required or voluntary parent group participation (as part of child services or otherwise)	same				
	2.6	Care or aid provided in home for child by outside professionals	same				
	2.7	Role of Regional Center for identified developmentally delayed children	including CDSA, or other service specializing in treatment of disabilities				
3. Home and Neighborhood Safety and Convenience	3.1	Yard vs. no yard, fencing, neighborhood play areas and accessibility to child	same				
	3.2	Architectural issues, house safety and convenience (space available, one or two stories, interior organization & design, childproofing)	same				
	3.3	Neighborhood safety measures perceived by parents, judged by observers, and	same				

		assessed by city statistics					
	3.4	Use of neighborhood places and services by child and family	same				
4. Domestic Task and Chore Workload (Excluding Childcare)	4.1	Chore and task inventory: who does these, frequency, and timing; level of family concern over work and cleanliness, etc.	same				
	4.2	Absolute workload (numbers of persons in family, time spent, etc.)	same				
	4.3	Perceived workload pressures on parents and children	parent directly notes work load pressure				
	4.4	Complexity of chores and who does them; ages at which children take on work with responsible, self-managed sequences of tasks	mark only if parent notes complexity; otherwise, consider code 4.1				
	4.5	Task sharing, complementary, specialization of roles	same				
	4.6	Exclusivity of work or available alternatives to person with primary responsibility	mark if parent indicates he or she is only person who completes task or if he or she notes alternatives (ex. laundry service vs washing clothes)				

	4.7	Children's work outside home (if any)	same				
	4.8	Personnel available in family for aid (family size & composition, non-kin members)	mark if parent indicates he or she receives help from people living in home				
5. Childcare Tasks	5.1	Personnel available and used (parents, grandparents, other kin, siblings, friends, neighbors)	mark if parent indicates he or she receives help from others				
	5.2	Number and variety of specific childcare jobs	same				
	5.3	Amount of care and supervision time daily, degree of direct responsibility, control and monitoring required	same				
	5.4	Additional childcare due to developmentally delayed child's particular problems (vs. routine care for other children)	parent notes specific types of care needs for child with disability				
	5.5	Specialized settings or interactions created by child's problems (program requirements, reading, special babysitting skills)	same				
	5.6	Extent of specialized instrumental childcare jobs vs. social involvements, or training, etc.	parent notes proportion/a mount of time spent on childcare vs. other tasks (ex. limited time with other children)				

6. Children's Play Groups	6.1	Age, sex, and kinship category of playmates, including family, kin, and neighborhood groups	same				
	6.2	Frequency of participation in playgroups	same				
	6.3	Parent-organized and created playgroups; frequency, type, and hassle involved in such groups	same				
	6.4	Extent of parental and/or older siblings structuring and intervention in peer play groups; degree of supervision and monitoring	same				
7. Marital Relationship	7.1	Quality of couple roles (companionate/intimate, degree of role separation, sharing of decision-making, domains of control and responsibility)	same				
	7.2	Degree of task complementarity (fixed role vs. shared functioning styles)					
	7.3	Degree of socioemotional involvement and sharing in decisions involving developmentally delayed child	same				
	7.4	Decision-making style	same				
8. Networks and Organizational Involvement	8.1	Formal groups (church, organizations, parents' groups, et)	same				

	8.2	Informal (neighbors, kin, friends, casual contacts with professionals [, chats after school, etc.]); parents' contacts with other parents of handicapped children	same				
	8.3	Degree of instrumental vs, socioemotional involvement with such groups	same				
	8.4	Degree of support by groups vs. aid given to others in groups	same				
9. Role of Father and Mother in Childcare	9.1	Degree of participation (see tasks, marital role, and childcare data)	same				
	9.2	Organizational involvement (see previous section)	same				
	9.3	Quality of involvement with spouse regarding developmentally delayed child (dominant, coequal, supportive, avoidant)	same				
	9.4	Nonbiological males involved in home, roles of alternate male caretakers	same				
	9.5	Focus of father involvement with developmentally delayed child (instrumental, supervision and management, recreational, emotional, etc.)	same				
	9.6	Sibling and other nonparental care replacing or	same				

		complementing parental care					
10. Sources of Child Cultural Influence	10.1	Overall TV viewing, games, organized sports and activities, family cultural activities, etc	same				
	10.2	Extent of parental management, control in presentation of information for child	same				
11. Sources of Parental Information and Goals	11.1	Books, lectures, training, classes, required parent groups	same				
	11.2	Special job, interest, or status giving access to information (mother is registered nurse and knows about programs, father knows psychologist in field)	same (include having another child with a disability)				
	11.3	Variety of alternative conceptions of treatment, etiology, et available to family (megavitamins, special programs, etc.); are parents aware of a range of ideas and developments regarding developmental delay?	same (include references to pediatrician providing information)				
12. Community Heterogeneity	12.1	Variety of social and cultural views of developmental delay, behavior and attitudes toward handicaps, etc. (see 11)	same (include community members have a welcoming attitude towards				

			people with disabilities)				
	12.2	Social and cultural views and attitudes toward conventional success or achievement in community, the value of education, etc.	same (references to the capacity of children with disabilities)				
	12.3	Diversity of local community as a reference point for child's status (, is community homogeneous and child, therefore, unique; does he/she "stand out" on some dimensions and not others [appearance, speech, movement, cognitive ability, etc.]; are these selectively important in community?)	same				

APPENDIX O

FOCUS GROUP ENGAGEMENT CODING INDEX

Codes	Activity	Engagement	No Engagement
1. Family Routines			
1.1. Household Chores			
1.2. Cooking/Preparing Meals			
1.3. Caring for Pets/Animal			
1.4. Doing Errands			
1.5. Food Shopping			
2. Play Activities			
2.1. Art Activities/Drawing			
2.2. Playing Board Games			
2.3. Playing Video Games			
3. Entertainment Activities			
3.1. Dancing/Singing			
3.2. Watching TV/Videos			
3.3. Listening to Music			
3.4. Playing Alone			
4. Parenting Routines			
4.1. Child's Bathtime			
4.2. Child's Bedtime/Naptime			
4.3. Child's Wake-Up Times			
4.4. Meal Times			
4.5. Fixing/Cutting Child's Hair			
5. Socialization Activities			
5.1. Family Gatherings			
5.2. Picnics			
5.3. Having Friends Over to Play			
5.4. Visiting Neighbors			
5.5. Sleepovers			
6. Gardening Activities			
6.1. Doing Yard Work			
6.2. Planting Trees/Flowers			
6.3. Growing Vegetable Garden			
7. Family Rituals			
7.1. Family Talks			
7.2. Saying Grace at Meals			
7.3. Religious/Spiritual Readings			

7.4. Praying			
7.5. Family Meetings			
8. Child Routines			
8.1. Brushing Teeth			
8.2. Washing Hands/Face			
8.3. Cleaning Up Room			
8.4. Picking Up Toys			
8.5. Toileting/Going to Bathroom			
8.6. Dressing/Undressing			
9. Family Celebrations			
9.1. Holiday Dinners			
9.2. Family Member's Birthdays			
9.3. Decorating Home (Holidays)			
10. Literacy Activities			
10.1. Reading/Looking at Books			
10.2. Telling Child Stories			
10.3. Adult/Child Play Times			
10.4. Taking Walks/Strolls			
10.5. Bedtime Stories			
10.6. People Coming/Going (Hellos/Good-byes)			
10.7. Cuddling with Child			
11. Physical Play			
11.1. Riding Bike/Wagon			
11.2. Playing Ball Games			
11.3. Water Play/Swimming			
11.4. Rough Housing			

APPENDIX P
SUBJECTIVITY STATEMENT

I am a parent of a three-year-old who has received early intervention services. In addition to my personal experiences with early intervention services, I have been employed as an early intervention service provider. Therefore, I have been on the giving and receiving end of early intervention services in the home. My experiences and knowledge will enable me to gain an understanding of the settings and participants stories that might otherwise go unnoticed (Maxwell, 2013). To maximize the benefits and minimize the threats of my personal subjectivities, I will engage in self-reflexivity throughout the research process (Tracy, 2010).